Lectures
ON
SOME POINTS RELATING TO INJURIES TO THE HEAD.

Delivered at the Royal College of Surgeons,

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LECTURE III.

MR. PRESIDENT AND GENTLEMEN,—In my second lecture your attention was further directed to signs of fracture in the base of the skull, to extravasation of blood in the orbit, and to the appearance of extravasation over the mastoid process, and reasons were given why this latter important sign should so frequently be a late manifestation of fracture of the posterior fossa. Traumatic neuritis of the optic nerves was dwelt on, and in considering the injuries to some cranial nerves which may accompany or follow fractures of the base, the seventh nerve came under discussion. I had read notes of fifteen cases, which indicated amongst other points the improved prognosis as to recovery from facial paralysis that can be given when it is a late manifestation after these fractures. In nearly all it was apparent that the hearing on the same side was also impaired; usually this was shown at the time of the onset of the paralysis, but in three fatal cases the patients were unconscious until death. In fourteen other patients who presented signs of fracture of the middle fossa deafness was found, and was a cause of complaint; six developed it after hæmorrhage from the ear (it was found in two who complained when they regained consciousness, in two on the sixth day, and two on the ninth day); six after hæmorrhage, followed by watery discharge of varying amount and duration; two after epistaxis, in one of which watery discharge from the nose followed (both had hissing and other noises in the ears). As a rule, the prognosis, as in paralysis of the portio dura, was more favourable to recovery if the deafness was of late onset. In many instances the membrana tympani was seen to be ruptured, but the loss of hearing did not seem at all considerable, and did not give rise to complaint either then or later.

Mr. Leonard Bidwell has collected a series of 106 cases of fractured base, published in the columns of THE LANCET from the first number up to the present date, and in fifteen of these there was facial paralysis. Two were fatal—one from arachnitis, the paralysis appearing on the fourth day; in the other it was noticed in a few hours, but nothing is recorded further. In one case the result is not mentioned; in four it is stated that the paralysis was permanent, and it came on the second, fourth, eight (with paralysis of the fifth nerve), and thirty-fourth days (disease of mastoid process) after the accident. In eight the paralysis had gone or was improving at the time of the last note. In one it developed at once (lasting forty-one days); in two on the second day (in one of which paralysis of the sixth nerve accompanied and did not afterwards improve); in the others it developed on the fourth, fifth, eighth, ninth, and tenth days, lasting for a period of fifty, ninety, fourteen, fifteen, and seventeen days respectively. The condition of the hearing is not given in all, but in some permanent deafness remained, though the paralysis of the portio dura disappeared. These cases also indicate the more hopeful prognosis when the onset of the affection is delayed.

THE TEMPERATURE FOLLOWING SOME CASES OF INJURY TO THE HEAD.

In the larger number of cases of severe injury to the head, such as fracture of the base, the alteration of the normal temperature differs but little, if at all, from that following the infliction of an injury of corresponding magnitude to other important parts of the body. There is the depression which accompanies the shock so frequently seen in such cases, followed by a rise to 100° or 101°, then a fall again often below normal, and a rise to the usual normal line. But not infrequently the remainder of the observations indicates much nervous depression, and the record keeps below the normal at 97° or thereabouts for some days. If the injury have caused a scalp wound as well as a fracture of the base, even though this be but small, there is the possibility that such a wound may take on suppuration, and the temperature will then indicate the process. Meningitis may cause a change from the usual course, and lead to a fatal termination. Then, again, the onset of erysipelas or pyæmia must be remembered as a possibility, though these diseases are certainly much less frequently causes of a fatal result after an injury than used to be the case. There is also a rise of temperature on the second day to about 100° in some cases of laceration of the brain, and by the third day it is usually 101° or 102°, even when the accompanying injury does not include a scalp wound, and the fracture, if there be one, is not compound. But it is not to the temperature after these slight lacerations of the brain substance, or to that of the complications named, that I am now desirous of directing attention, but to a rise of temperature occasionally met with after a fracture of the base of the skull, a rise which commences not many hours after the receipt of the injury, which may amount to as much as 10° or more within a few hours, and is too often followed by a fatal termination.

In THE LANCET, vol. i. 1879, p. 50, are published four cases of fracture of the base of the skull which were under the care of Mr. Hulke in the Middlesex Hospital. In each of these the patient died with a high temperature, which from the few lines of introduction to the account was apparently regarded

FIG. 8.

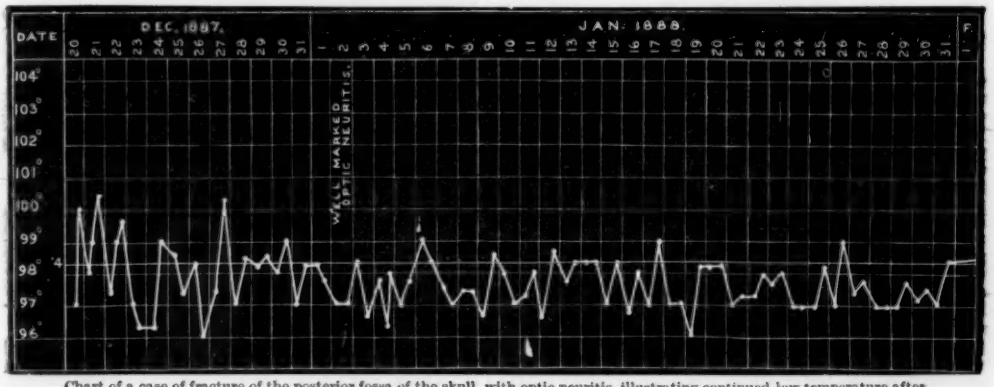


Chart of a case of fracture of the posterior fossa of the skull, with optic neuritis, illustrating continued low temperature after fracture of the base.

as an example of rise of temperature the result of bruising of the bones. The post-mortem examinations, however, demonstrated the fact that with the damage to the bones was associated a condition of marked cerebral contusion. In the first case, that of a woman aged fifty-five, who lived fifty-seven hours, the temperature reached 103·8° eight hours before death. There was a fracture in the middle fossa of the skull which had lacerated the dura mater and caused slight indentation of the brain. A large clot was found in the arachnoid space over the upper and lateral surfaces of the right hemisphere. The under surface of the front and middle lobe of the cerebral hemisphere on the left side was bruised and softened, and there was a thin clot in the arachnoid space. In the second case, the patient lived two days and the temperature rose to 104° before and 105° after death. There were a fracture in the anterior fossa and a thin film of blood-clot under the dura mater along the line of the crack and a very extensive clot on the lateral surface of the right cerebral hemisphere, with much bruising of the brain there. In the third case, that of a heavy brewer's man aged twenty-eight, who survived the injury only eleven hours and a half, the patient died with a temperature of 105·8°. There was a fracture in the middle fossa on the right side, one of the large branches of the middle meningeal artery was opened, and a clot the size of half an orange was between the dura mater and the bone. The convolutions of the under surface of the left hemisphere bounding the Sylvian fissure were bruised. The fourth case was a still more remarkable one. A big muscular labourer was admitted unconscious, and died on the fourth day, not having recovered consciousness. The temperature on the third evening was 104·5°, it fell to 103° on the fourth morning, but rose to 108·7° before death. There was a fracture in the left middle fossa. The upper and outer surface of the parietal and temporo-sphenoidal lobes of the left cerebral hemisphere corresponding to the line of fracture were extensively but superficially lacerated, blood was extravasated here into the pia mater and under the arachnoid, and the convolutions were flattened by a large extravasation between the dura mater and the bones. In the outer surface of the right temporo-sphenoidal lobe were similar lacerations, but they were deeper and more extensive than those in the corresponding left lobe. There was also more blood extravasated into the pia mater and under the arachnoid, and slight flattening of the cerebral convolutions. Here are four cases with a most unusual temperature, all proving rapidly fatal within four days of the injury, and presenting no evidence of inflammatory changes about the head or in any part of the body when examined after death. It will be noticed that the only marked lesion common to all of them was contusion of the cerebral substance associated with hæmorrhage to a greater or less amount. The important question presents itself, Have we in this rise of temperature a symptom of value in diagnosing the effect of the injury which has been inflicted on the cranium or its contents? To aid us in answering this question I will read brief notes of some cases which have been observed in St. Thomas's Hospital. The points to which I would particularly direct attention are—the injury to the skull and its position, the duration of life after the accident, the temperature before death, and the condition of the brain at the post-mortem examination.

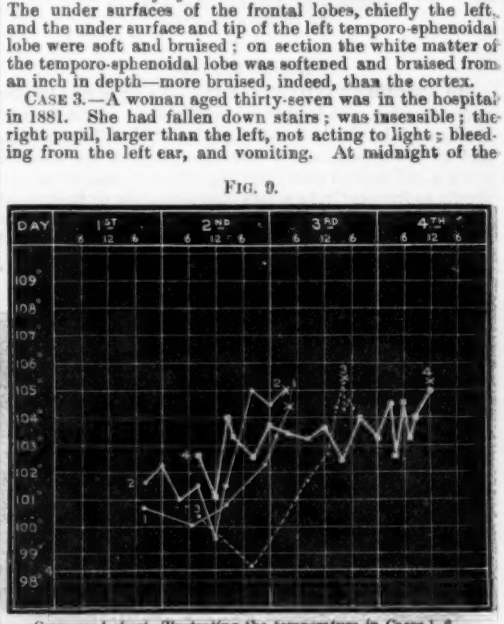
CASE 1.—A woman aged sixty-three was under the care of Sir Wm. Mac Cormac in 1883. She was picked up after having fallen down an area, and was admitted in an unconscious condition, but made some inarticulate sounds when spoken to loudly. The unconsciousness deepened into coma, and the patient died in two days. From the symptoms during life she was supposed to have sustained a fracture of the right, middle, and anterior fossæ, and on the day of admission in the evening the temperature was 100·8°; at 1.30 A.M. on the third day, 103·4°; at 3.30, 104·4°; ten minutes after death, 105°. (See chart, Fig. 9, No. 1.) The diagnosis as to the position of the fracture was confirmed by the post-mortem examination made by Dr. Hadden, who reported:—"The middle meningeal artery is ruptured, and outside the dura mater is a large blood-clot. The convolutions on the outer side of the right hemisphere are much flattened; there is no blood at the base of the brain; all the left temporo-sphenoidal lobe is much bruised superficially; it is soft and blood-stained. There are also a few small hæmorrhages scattered up and down, but none of any size. The puncta vasculosa are prominent, and there are a few hæmorrhages in the white matter. The bloodvessels at the base of the brain are atheromatous, but not markedly so, not obstructed, not ruptured at any point."

CASE 2.—A child aged three years and a half was in St. Thomas's Hospital in 1886 for an injury to the head caused by the passing of the wheel of a cab over it. Next day, after a good night, the child was lying quietly, but was pale and resisted examination. Respiration 48, noisy, but no actual stertor. Pulse 148 to 180, fairly strong. The child gradually became comatose, and died two days after the injury. Temperature on the day of admission at 8 P.M. was 101·6°, and at 4 A.M. on the third day 105°. (See Fig. 9, No. 2.) At the post-mortem examination made by Dr. Hadden there was a very extensive fracture of the skull extending from the vault into the left anterior fossa, a second extending from the right middle to the right anterior fossa, and an isolated fracture in each middle fossa. No effusion on or injury to the convex surface of the brain. The under surfaces of the frontal lobes, chiefly the left, and the under surface and tip of the left temporo-sphenoidal lobe were soft and bruised; on section the white matter of the temporo-sphenoidal lobe was softened and bruised from an inch in depth—more bruised, indeed, than the cortex.

CASE 3.—A woman aged thirty-seven was in the hospital in 1881. She had fallen down stairs; was insensible; the right pupil, larger than the left, not acting to light; bleeding from the left ear, and vomiting. At midnight of the second day, not having recovered consciousness, she developed signs of asphyxia. No relief was afforded by venesection. She died next morning, having lived two days. At 4 A.M. of the day after admission the temperature was 100·4°; at 8 P.M., 98·4°; on the third day at 3.30 P.M., when she died, 105·2° in the rectum, gradually falling after death until 5.40, when it was 104°. (See Fig. 9, No. 3.) At the post-mortem examination, Dr. Sharkey found a considerable quantity of blood between the dura mater and the surface of the brain on the left side only, and contused brain substance oozed through the membranes over the left frontal lobe. The extremity of both frontal lobes was contused, on the right side only the tip, but on the left the injury extended back as far as the anterior ascending convolutions. The red pulpy contused substance was quite superficial, and all the deeper parts were healthy and uninjured. A fracture extended from the left frontal bone across the base of the skull on the same side into the foramen magnum.

CASE 4.—A man aged twenty-nine was under the care of Mr. Croft in 1889. The horse which he was driving bolted, and he was thrown on his head. He was admitted a quarter of an hour afterwards with symptoms indicating extensive fracture of the skull and injury to the brain, but could be roused by loud talking or shaking and resisted pricking. Respiration natural. On the fourth day the breathing became stertorous and he died in profound coma. The temperature at 8 A.M. on the 26th, the morning after admission, was 102·6°; at 12, 105°. (See Fig. 9, No. 4.) At the post-mortem examination made by Dr. Sharkey there was no external mark of injury. There was fluid blood in the scalp, especially posteriorly and on the left. On opening the dura mater it was seen to be

FIG. 9.

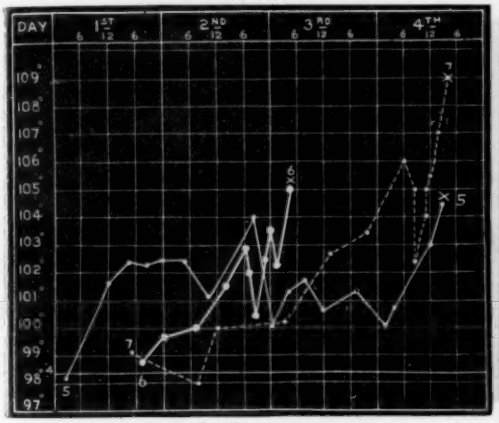


Compound chart, illustrating the temperature in Cases 1, 2, 3, and 4 of cerebral contusion. × indicates the time at which death occurred.

distended with blood on the left side, and the brain showed a very thin covering of it on the right. The clot on the left was adherent to the dura mater in the temporal fossa and was so firmly attached that it was difficult to scrape it off. The brain was much bruised and broken up at the extremity of the frontal lobes, much more so on the right than on the left; the softened part was dotted with punctiform hæmorrhages. Extensive fracturing of the skull was found, two lines of the fracture, running backwards and downwards in the posterior fossa, on the right side into the groove for the lateral sinus, on the left forwards across the petrous bone into the anterior fossa.

CASE 5.—A powerfully-built man aged fifty-five, under the care of Mr. Pitts from Aug. 5th to Aug. 8th, 1885. He had been knocked down by a passing cart. There were a small scalp wound over the back of the skull, epistaxis, and considerable irritability. There was no hæmorrhage from the ears. The pupils were not acting to light, the respiration was fast and unequal, and the pulse slow and weak. He passed into a delirious condition, raving at night; there was occasional epistaxis, and for the last two days constant spasmodic movements of the muscles of the face on both sides. On the fourth day he was weaker; he continued insensible, and died. The temperature rose from 98·2° at 2 A.M. on the 5th to 104·6° at 3 P.M. on the 8th. (See Fig. 10, No. 5.) The post-mortem examination made by Dr. Hadden showed the whole surface of the brain covered with hæmorrhages. The foreparts of the frontal lobes were much contused, and

FIG. 10.



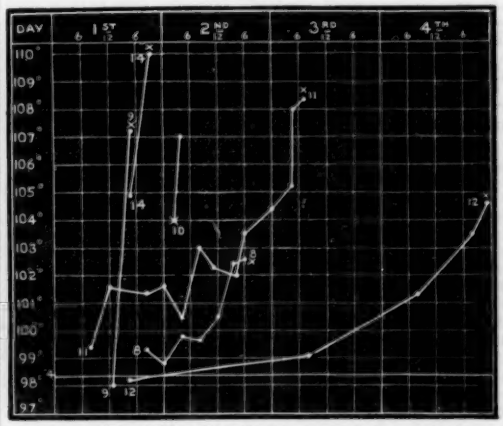
Compound chart, illustrating the temperature in Cases 5, 6, and 7 of cerebral contusion.

showed much hæmorrhage. The lobes of the cerebellum were greatly bruised posteriorly, the right much more so than the left. There were three separate and distinct fractures, one in the right side of the posterior fossa, one in the left middle fossa, another in the right anterior fossa.

CASE 6.—A boy aged sixteen was admitted under the care of Sir William Mac Cormac in 1882 after a fall from a scaffold, a supposed distance of twelve feet. He was unconscious, turning about from side to side when touched. There was left external strabismus. The pulse was 72, feeble and irregular. He lay in bed curled up on the right side, and was very restless all night. Was unable to swallow, and never regained consciousness. At 9 P.M. of the following day I made a note that he was lying on his back with a livid and congested appearance of the face, a little froth at the corners of his mouth, beyond which could be seen a dry tongue. The respiration was 60, accompanied by stertor. The pulse was very rapid and irregular. The arms were rigidly flexed on the chest, and the legs moved up and down alternately with a certain degree of regularity, whilst an occasional spasm of the muscles of the back made his appearance that of a patient suffering from tetanus. The left pupil was larger than the right, both acting to light. He was too restless to permit of examination with the ophthalmoscope, and died at 2 A.M. on the third morning. The temperature on the first day (Oct. 27th) at 8 P.M. was 98·8°; on the 29th at 2 A.M. it was 105°. (See Fig. 10, No. 6.) At the post-mortem examination Dr. Hadden found a fracture extending from the zygoma into the middle fossa, and backwards nearly to the occipital protuberance. A good deal of blackish blood was found over all the convex surface of the brain. Most of this was readily washed off, but the right temporo-sphenoidal lobe was much softened throughout its whole extent; also superficial infiltration of blood, and some small hæmorrhages in the white matter immediately subjacent to the cortex. There was also a small superficial hæmorrhage over the front half of the right frontal lobe. A laceration in a large branch of the middle cerebral artery was also found.

CASE 7.—A cabman aged twenty was admitted under the care of Sir William Mac Cormac on Feb. 7th, and survived the injury three days. He was said to have been drinking, but had been thrown from his cab. On admission he was partly unconscious, would not answer questions, and objected to examination. The eyes were normal, the surface of the body cool, and he was quite sensitive to pain. There was a slight abrasion on the back of the head, surrounded with very slight swelling. For nearly twenty-four hours there was twitching of the whole body, succeeded by paralysis of the right side. Between the 8th and 9th there was a succession of thirty fits; all power of movement was gone from the right side on the 9th, and the convulsive movements of the left side were decreasing in severity. He died at 2 A.M. on the 10th. There was no optic neuritis. The temperature on the 7th at 8 P.M. was 99°; on the 10th at 2 P.M. it was 109°. (See Fig. 10, No. 7.) An extravasation in

FIG. 11.



Compound chart, illustrating the temperature in Cases 8, 9, 10, 11, 12, and 14 of cerebral contusion.

the scalp an inch or so behind the right parietal eminence covered the commencement of a fracture which ran backwards and to the left across the occipital nearly to the left petrous bone. A large black blood-clot was also found by Dr. Hadden on the dura mater, corresponding to about the posterior third of the vertex of the left hemisphere. The extravasation was circular, about five inches in diameter, adherent to the dura mater, but not involving the brain subjacent, but the convolutions corresponding were much flattened. The under surface of the left frontal lobe, tip, and under surface of the left temporo-sphenoidal lobe were much bruised, and showed extensive extravasation of blood. The left olfactory bulb was much crushed.

CASE 8.—A man aged thirty-six was under the care of Mr. Mackellar from the 1st to the 2nd of November, 1889. He had been insensible since a fall down some area steps on Oct. 25th. He was admitted insensible, with fetid breath. There were bruises behind the right ear and in various parts of the body. He had epileptiform seizures and died. The temperature on Nov. 1st at 8 P.M. was 99·2°; on the 2nd it rose to 102·6° at 8 P.M. It is probable that had the temperature been taken for a longer period in this case, it would have registered a higher rise. (See Fig. 11, No. 8.) At the post-mortem examination made by Dr. Hadden there was no scalp wound. A linear fracture starting two inches and a half to the right and one inch above the torcula Herophili ran downwards into the right sulcus lateralis. There was some bruising of the under surface of the left parietal

lobe; the convex surface of the left hemisphere was concealed by a large recent hæmorrhage, which had caused marked flattening of the surface.

CASE 9.—A jobber aged forty-eight was under the care of Mr Mackellar on July 10th, 1886, only surviving the injuries received by a fall from a cart for two hours and three-quarters. He was admitted unconscious, and had convulsions and bleeding from the right ear. On admission the temperature was 98°, and at death 107·2°. (See Fig. 11, No. 9.) At the post-mortem examination Dr. Hadden found fractures in the posterior fossæ on both sides of the middle line. On removing the dura mater, a quantity of recently effused blood, with much staining, was seen on the vertex, mainly in front. The tips and under surfaces of the frontal lobes, especially the right, were much bruised, and showed a good deal of blood extravasation. There was a little bruising also of the right temporo-sphenoidal lobe.

CASE 10.—A similar case, that of a bricklayer aged thirty-one, was under the care of Mr. Sydney Jones from the 7th to the 8th of August, 1888. The man had been turned out of a cart and became unconscious at once After admission stertorous breathing developed, and he continued unconscious until death. The temperature at death was 104°, rising a few minutes afterwards to 107°. (See Fig. 11, No. 10.) At the post-mortem examination, which Dr. Hadden made, there was much blood effused into the scalp in the left occipital region, and a fracture extending downwards, with some comminution, into the foramen magnum. The dura mater was not lacerated and the sinuses not torn. The tip and orbital surfaces of the right temporal lobe were much contused, the bruising not extending beyond the cortex. There was no injury to the cervical spine. A moderate amount of liquid blood was found over the convolutions on the convex surface.

CASE 11.—A corn merchant aged twenty-five was under the care of Mr. Pitts from the 11th to the 14th of August, 1887. He had been thrown from a cart whilst driving, and was brought in unconscious, breathing quietly, pupils normal, but extremities cold. There was a compound linear fracture of the vault three inches behind the left ear. On the 13th he was still unconscious and very restless; the left arm was the weaker and less sensitive to pain. Restlessness increased; he had fits, but no stertor; the pulse increased in rate, and the temperature was rising. Mr. Pitts trephined over the fracture and examined the condition of the parts beneath the fracture. No clot was found. Death occurred six hours later. The temperature on the 12th at 8 A.M was 100·4°; on the 14th at 4 A.M, 105·4°; pulse 122, respiration 60; at 5 A.M., 108°; at 6 30 A M, 108·4°. (See Fig. 11, No. 11.) At the post-mortem examination Dr. Hadden found that the fracture extended downwards into the posterior fossa, slightly lacerating the lateral sinus. The convex surface of the brain was stained, injected, and in many parts exhibited recent hæmorrhages into the pia arachnoid. The under surfaces and tips of the temporo-sphenoidal and frontal lobes on the right side were much bruised, the white substance being stained yellow and injected for nearly an inch subjacent to the cortex.

CASE 12.—A carman aged forty-five was under the care of Mr Croft from the 12th to the 17th of February, 1883. He had fallen from the top of a tramcar, and was brought in unconscious with a copious sero-sanguineous discharge from the left ear. The mouth was drawn over to the right side. The pupils were equal and firmly contracted, not reacting to light. Within two hours afterwards respiration became very slow and puffing and the pupils more contracted. At 3 A.M of the 13th he was able to recognise his wife On the 14th he was perfectly conscious, with normal respiration and regular pulse. He became very restless later in the day and wanted to get up. On the night of the 16th he was still very restless and talked of going out to work. The discharge from the ear, which ceased on the 15th, recommenced. Coma developed, and he died at 3 A.M. on the 17th. The temperature on the 12th was 98·4° at 8 P M; on the 16th at midnight, 104·6°, rising to 104·8° on the 17th, an hour after death. (See Fig. 11, No. 12.) At the post-mortem examination made by Dr. Percy Smith, a large clot was found covering the whole upper surface of the left hemisphere. A large lacerated cavity the size of a plum was found in the apex of the temporo-sphenoidal lobe, from which the hæmorrhage had taken place into the middle fossa of the skull. On the right temporo-sphenoidal lobe there was some bruising from contrecoup. A fracture with comminution was found in the middle fossa of the left side, extending by one branch through the internal auditory meatus, lacerating the seventh pair of nerves.

CASE 13.—A man aged twenty-three was found in a stable, having been kicked by a horse, and brought to St. Thomas's Hospital. He was admitted under the care of Mr. Mackellar on the 26 h and died on the 28th of August, 1881. There was a compound and comminuted fracture of the left parietal bone. He had not been insensible, and walked into the hospital; was even able to give his name and address. Four hours after the injury he could not recognise anyone, or talk. The left pupil was slightly the larger. Mr. Mackellar removed loose fragments the same evening. The patient answered questions on recovery from chloroform, and the pupils became equal. In the evening he was restless and suffered from headache. On the 27th the pulse was 140, full and heavy. He became more restless and quite unconscious on the 28th, and died at 12.45 P.M. The temperature on the 26th was 99° at 8 A.M.; on the 27th at 6 A M, 105·8°. Venesection was performed, and at 7 A M. there was a marked improvement; instead of tossing about he was fast asleep. At 10 A M. he was again restless; temperature 105·2°; at 5 P.M. 106°, when there were profuse sweating and twitching of the limbs. At 10.15 P.M. the temperature was 106·2°, the patient being slightly convulsed; venesection to 7 oz. On the 28th at midnight the temperature was 106°, and at 12.50 P M., five minutes after death, 106·4° in the axilla and 108·8° in the rectum. (See Fig. 12.) The brain was found considerably lacerated at

FIG. 12.

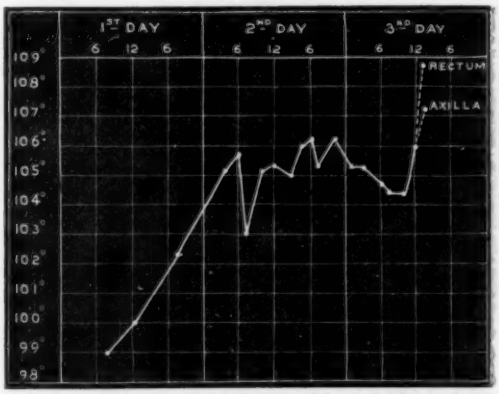


Chart of compound comminuted fracture of the skull, with cerebral contusion. (Case 13.)

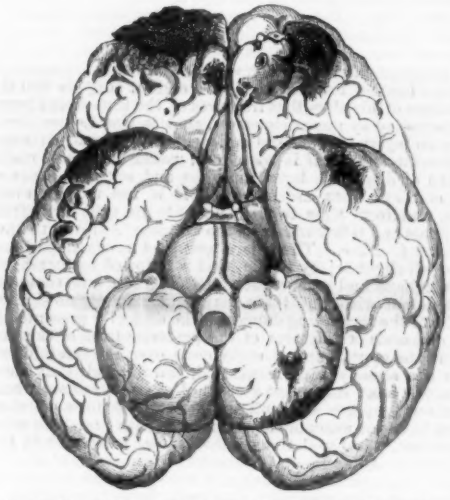
the point corresponding to the fracture. At the apex of each frontal lobe there was a slight amount of laceration and hæmorrhage, apparently from contrecoup. Beneath the dura mater at the point of fracture was a slight amount of clot (a thin layer). Brain substance generally congested. The fracture extended into the middle fossa on the left side

CASE 14.—A labourer aged forty, under the care of Sir Wm. Mac Cormac, on July 6th, 1885, after a fall, only survived his injuries (a fracture in the middle fossa on the right side and a fracture of the ribs) five hours and a quarter. He was unconscious, and had almost constant epileptiform seizures. At 4 P M. the temperature was 104·8, and after death it rose to 110°. There was no post-mortem examination. (See Fig. 11, No. 14.)

Here, then, are fourteen additional cases of fracture of the base in which there was a high temperature; in thirteen of them a post-mortem examination was made; in not one was there any meningitis or evident cause for the temperature, excepting the condition of the brain which had resulted from the injury. And this condition was essentially the same in all of them—that of a contusion with laceration of the brain substance at the base, varying but slightly in position and extent, and of the kind so commonly met with from contrecoup. Fig. 13 is from a specimen in the museum of St. Thomas's Hospital, which indicates the condition extremely well. It was removed by Dr. Gulliver from a man aged thirty-three, who had died under the care of Mr. Mackellar eleven days after a fall from a tram. He had received a star-shaped wound over the left occipital

region, and seemed to be stunned slightly; but the symptoms were difficult to make out, as he was under the influence of drink. He vomited. The notes say: "As the patient appeared to be suffering from concussion, he was admitted." Next day he lay in a helpless condition, with a temperature of 102°, and the temperature returned to normal only on the fourth day. On the fifth day he had epileptiform attacks, and these increased in number. On the ninth day he was trephined over the seat of injury, and on the tenth Mr. Mackellar also trephined over the fissure of Rolando on the right side; but in neither situation was any clot found as the symptoms appeared to indicate, and he died on the twelfth day. In this case the temperature did not again reach 102° until the evening of the tenth day, and the last observation only registered 100°. Briefly, the condition of the head found by Dr. Gulliver was as follows:—Extending through the occipital bone vertically into the foramen lacerum posterius and across the extremity of the petrous bone was a fracture. There was an effusion of blood at the extremity of the right frontal lobe, evidently caused by contrecoup, and there was a similar, but less extensive, one at the extremity of the left. Also there were smaller effusions at the extremities of the middle lobes. Corresponding to the scalp wound there was a superficial laceration of the cere-

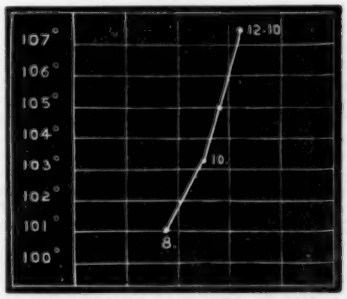
FIG. 13.



The bruising of the under surfaces of the frontal and temporal sphenoidal lobes, from a case in which the posterior fossa of the skull was fractured. The left side of the cerebellum was bruised and lacerated, and it will be noticed that the *right* frontal lobe is most severely injured.

bellum on the left side. This is an important preparation, indicating as it does severe contusion of the brain substance, as met with in contrecoup, and shows what an amount of damage to the frontal and temporo-sphenoidal lobes can be borne without producing death either from shock or hæmorrhage. If we consider those cases which presented a marked rise of temperature during life, we obtain the following result:—Of those living under twenty-four hours after the receipt of the injury, we find that in two of them no post-mortem examination was obtained; in one instance (Case 14) the temperature might have been due to hæmorrhage into the sheath of the cord, as in a third where such a condition was found. (See Fig. 14.) In two there was laceration of brain substance with hæmorrhage, one having a temperature of 103°. Of those who survived for a period longer than twenty-four hours, marked pyrexia was present in twenty-one, who showed no sign of inflammation at the post-mortem examination. I have already read notes of twelve which come into this group, and in all there was contusion or laceration of brain substance. Four others lived one day, and the temperature was rising at death; in one it was 104°, but no necropsy was held; in one it was 102·8°. One lived two days, and had convulsive seizures and a temperature of 101·4°, but there was no post-mortem examination. One lived four days, the temperature at death being 105·4°, and there was hæmorrhage from the middle meningeal as well as slight contusion of the brain. Two lived nine days; in one there was great bruising of and hæmorrhage into the anterior part of the brain, the extremities of both frontal lobes and both temporo-sphenoidal lobes being crushed, soft, and covered with hæmorrhages. The patient had symptoms of delirium tremens, and at death a temperature of 102·6°. The temperature record is lost in the second case. One lived ten days; at the post-mortem there was cerebral injury of the kind under discussion and a rupture of the kidney. One man lived eleven days, dying apparently from delirium tremens. He had fits and often irregular temperatures, as high as 103° on more than one occasion during the last two days of life; it was 105·8° at the last. In this case there was an extravasation of blood leading from the surface of the right prefrontal lobe for about an inch and a quarter into the white matter. The medullary substance around was stained yellow. Cerebral contusion with hæmorrhage was proved to be present in ten cases living under the twenty-four hours, but in only two was there any unusual rise of temperature. Of those surviving for a longer period, a similar condition was attended with marked alteration of the temperature curve in every case. The conclusion to which we must come, then, is that this rise of temperature is dependent upon the injury to the brain and not to the bones, and whether it will be manifested or not depends upon the rapidity with which death follows. If the hæmorrhage resulting from the injury is quickly poured out, the patient will not usually manifest any marked disturbance of the heat-regulating centres, but die coma-

FIG. 14.



The rise of temperature in a case of fracture of the base associated with hæmorrhage under the dura matral sheath of the spinal cord.

tose within a few hours. This conclusion agrees with observations on the temperature in cases of cerebral hæmorrhage which is not dependent on traumatism.

Is a rise of temperature of this character met with in hæmorrhage following rupture of the middle meningeal artery and the formation of a clot within the cranial cavity yet outside the dura mater? For the purposes of this inquiry we may take two papers on the subject of middle meningeal hæmorrhage, the one by Mr. Jacobson[1] and the other by Dr. Weismann of Zurich. In the series of seventy cases by the former there is one (Case 54, Sir Joseph Fayrer's) in which the temperature was 102° the night before death. A second (Case 56, Mr. Le Gros Clark's), that of a man who survived twenty-six hours after a fall on the head from a height of thirty feet, in which the temperature was 104·8° two hours before death. A third (Case 63, Mr. Davies-Colley's) in which a temperature of 103° was noted before the operation. In all of these there were laceration and contusion of the brain at the base, probably as the result of contrecoup, in addition to the hæmorrhage between the bone and dura mater which was the direct cause of a fatal ending. There are two or three cases recorded by Mr. Jacobson in which the temperature ran up to a remarkable extent after operation and removal of the greater part of the clot. In Mr. Beck's case (No. 27) this was 106·4° twenty-four hours after the operation and half an hour before death, rising to 108·4° five minutes afterwards. There had been no apparent injury to the brain. The cause of the excessive temperature in these cases does not, however, come within the scope of

[1] Guy's Hospital Reports, vol. xliii.

our present inquiry, as it occurred after operation. Dr. Weismann,[2] who collected a series of 273 cases of hæmorrhage following rupture of the middle meningeal artery, describes amongst them, besides the cases referred to above as included amongst those given by Mr. Jacobson, or as published by Mr. Hulke, twelve others; of these, in six one recovered, and there is no mention of the condition of the brain, or no post-mortem examination was made, in the other five. In six where the condition of the brain is given, it was contused in four. Of the other two, one had a temperature over 102° before operation and died from pneumonia, a second a temperature over 106° without apparent contusion of brain.

Of other instances of rupture of the middle meningeal artery under my observation in which there was no fracture of the base there is the well-known case under the care of Mr. Croft,[3] which recovered after operation, in that there was no rise of temperature. In another, where the late Mr. Francis Mason trephined on the third day, the temperature three hours and a half before operation was 102·4°, it then fell to 101·4°, and rose to 106° at death, ten hours after the trephining. In this case, a man aged sixty-two, there was a compound fissured fracture of the parietal, and, in addition to the lacerated middle meningeal artery, there were contusion and laceration of the prefrontal and temporo-sphenoidal lobes from contrecoup. We cannot, then, say that there is no rise of temperature in all cases where unconsciousness is due to hæmorrhage after laceration of the middle meningeal artery dependent upon an injury to the head; but we may, I think, conclude that if there is an excessive rise of temperature in a patient the subject of intracranial hæmorrhage, there is a strong probability that the hæmorrhage is subdural, or if between the dura mater and the bone, that there is accompanying contusion and laceration of the brain substance—a circumstance which renders the prognosis much more serious.

I would submit to your judgment the following propositions, which express my ideas somewhat differently. If within three days after an injury to the head a patient passes from a condition of unconsciousness or semi-consciousness to one of increasing coma, or after a period of return of consciousness a similar condition of coma supervenes, and with the coma there be a rise of temperature of or above 103°, the condition is the result of cerebral contusion with some laceration, and this is most likely dependent on contrecoup and associated with hæmorrhage from the damaged brain. This injury has probably affected the frontal or temporo-sphenoidal lobes or both, and this is rendered all the more probable if the injury has been inflicted on the back part of the head; further, a similar condition supervening on injury to the side of the head, though in rare cases caused by hæmorrhage from rupture of the middle meningeal artery, in the absence of local depression of bone, is most likely the result of injury to the cerebral substance at the base, but it must be remembered that both conditions may be present in the same patient.

The fact that so many patients in whom cerebral injury has caused hæmorrhage die within twenty-four hours afterwards without rise of temperature makes the temperature record of less value as a means of diagnosis than it would otherwise be, but there remains a large number of cases in which the observation may be of assistance. Rarely we find acute meningitis developing and running its course to a fatal termination within twenty-four hours, with coma and unequal pupils. I have notes of one such case, that of a girl eight years of age, in whom such a condition supervened after fracture of the vault. There was, however, no rise of temperature, such as that which we have been considering.

THE DIAGNOSIS OF BASAL FRACTURES.

As a result of careful analysis of the cases contained in these tables I think we may say that in fractures involving the anterior fossa of the base of the skull the patient has usually received a blow in the frontal region, either from a weapon of some kind, or as the result of a fall. That the injury has produced bruising or wound of the part struck, and there is considerable epistaxis, and the appearance of ecchymosis under the conjunctiva, either immediately or at a later date. Sometimes the amount of blood effused into the orbit is sufficient to cause protrusion of the eye, and interference with the action of the muscles. Loss of vision may supervene in the eye on the injured side; loss of smell is rarely noticed. There may be paralysis of the third or sixth nerve. In fractures of the middle fossa the patient has usually fallen from a height, from a vehicle, or been knocked down in the street, and there is a wound or contusion over the parietal or fronto-parietal region. As a rule he is bleeding profusely from the ear on the side injured; there may be, however, a free watery discharge from the first, or this may supervene on the cessation of the hæmorrhage. Facial paralysis, with or without deafness, is occasionally met with, and is an important sign of fracture; if it be present from the first, it will probably become permanent. The supervention of suppuration in these cases, or the presence of middle ear disease at the time of the accident, is a most serious complication. Fractures of the base having their origin in the posterior part of the skull are most frequently met with in big, heavy people, and result most commonly from a fall backwards on hard pavement from a vehicle, from a height, or down steps. There may be a contusion or wound of the part struck. The latter is seldom extensive, rarely exposing the bone. The former is often very evident; they frequently overlie the commencement of the fracture. If the middle fossa be not involved, the only reliable sign of the fracture is the appearance of ecchymosis over the mastoid process; and, as this does not usually appear for some days, great care must be taken with patients who come under notice after injuries of the occipital region, as fractures in that part of the base are very fatal. These fractures are not seldom followed by double optic neuritis. Epileptiform convulsions are more common than after fractures in the other fossæ of the skull.

I recollect on one occasion when going round the wards of a large London hospital to have heard a surgeon tell the members of his class that fractures of the base were always accompanied by unconsciousness, that it was impossible to have an injury to the head sufficient to produce a fracture without it. This, if it were true, would be a most useful means of diagnosis, between slight and severe injuries of the cranium; but unfortunately it is not true in every case, and from time to time patients are sent away from hospitals and infirmaries who are afterwards proved to have suffered fracture. There is a group of much importance in which slight injury to the head is followed by meningeal hæmorrhage and compression of the brain, but these are seldom met with, and there may be absolutely no signs to indicate the impending danger. The difficulty presented in the diagnosis of fractures of the posterior fossa of the base before the appearance of ecchymosis over the mastoid process has already been mentioned, and I think that these form the most important section of cases occasionally sent from our hospitals as drunk and not suitable for admission. They have not uncommonly been dosed with brandy or other stimulant, the usual immediate popular treatment in this country for all accidents; hence the breath smells of alcohol. Again, such patients sometimes show a curious, half-silly expression, are mentally confused, drowsy, complain of headache, and sometimes vomit material smelling of the beer or spirit which they have taken. The injury to the head is not found unless careful search be made, having been inflicted on a part thickly covered with hair, and the blood, if there be a wound, is rarely in large amount. The period of unconsciousness may be very slight or absent, and, as it is supposed by his friends that the man was "only stunned," it may be some hours, or even days, before there is an application made for medical aid. More than this, unless a house surgeon is on the look-out for mastoid ecchymosis, the case, if admitted to the wards, may be allowed to remain as one of concussion of unusual severity, until his attention is drawn to the discolouration of the skin over the mastoid process by a more careful observer. Before the appearance of this ecchymosis there are symptoms which make one suspect the nature of the injury. The patient when seen by the surgeon will usually be found lying in bed on his back with the sheet drawn up to the forehead, so as to cover the eyes; drowsy, but easily roused to answer questions; complaining of severe headache in the frontal region, and possibly over the occiput; manifesting a desire to escape from the light. If the occipital region is carefully examined, especially when the head has been shaved, there will probably be found a contused area, easily denting on pressure, or a small scalp wound with contused edges, out of proportion to the apparent effect of the injury to the brain. The headache is severe, and if the patient live beyond the fourth day the examination of the eyes is not unlikely to reveal the presence of optic neuritis. These

[2] Zeitsch. für Chirurgie, 1885, Bände xxi. und xxii.
[3] THE LANCET, vol. i. 1889.

symptoms can hardly be mistaken for those of cerebral irritation, as described by Mr. Erichsen.[4] Only one or two patients were in that condition after fracture of the posterior fossa, and the state is fully described in the notes which were made at the time, but as the patients recovered it is not possible to give the pathological condition on which the symptoms depended. This cerebral irritation may be met with after blows producing concussion of the brain, in whatever region of the skull they have been inflicted. In the large number of cases of concussion of the brain observed during the years over which these observations were spread, it was met with much more frequently than the condition which I have attempted to describe, and which was probably due to accompanying contusion of the base of the brain, whilst after fracture of the base cerebral irritation was rare. I would not have it understood that the condition to which I have directed attention is only found associated with fracture in the posterior fossa, for I have seen it after blows in the occipital region where no fracture was present, judging by the absence of further proof.

The following account illustrates many points which several of those in the fatal and non-fatal groups corroborate:—

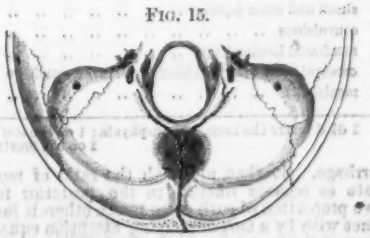
A stout woman, aged fifty-five, was admitted to the Royal Free Hospital on Dec. 24th, 1888. She was said to have been knocked down in the street by a passing cab. Was not insensible, but appeared silly and partly conscious, answering when spoken to loudly. There was some vomiting, which ceased after admission, and the vomited matter emitted an odour of alcohol. Her appearance was said to have been that of a drunken woman, "stupidly drunk." She lay in this condition until the evening of the 26th, when she seemed a little better. On the 28th, when I first saw her, the following note was made:—"Patient lies in an apathetic half-conscious state, with her eyes closed; when spoken to she answers slowly and rationally, and then either rambles on or keeps quiet until another question is asked. Sometimes she suddenly makes some statement. She complains of headache on the right side of the forehead, but will not admit that she has had an accident." She was lying on her back with the sheet pulled over her face, and soon replaced it if it was moved. There was slight swelling and grazing of the skin over the bridge of the nose, and ecchymosis at the inner angles of the orbits. No subconjunctival hæmorrhage. Ecchymosis was noticed for the first time over the left mastoid process, there was also a swelling with a depressed centre about the posterior superior angle of the left parietal bone. No effusion at the back of the neck and no other evidence of injury excepting a bruised thigh. Mr. Mackinlay kindly examined the eyes on more than one occasion. On the 31st he reported "In the right eye I find no optic neuritis, the veins of the retina are rather too full and tortuous. Cataract extraction has been done in this eye, and there is some thin capsule in the coloboma. In the left eye the lens is cataractous, and no examination of the fundus can be made." On Jan. 7th the disc was rather hyperæmic and the margin blurred. On the 19th undoubted optic neuritis was reported, and on the 28th the margin of the disc was much clearer. During her residence until Jan. 26th she complained occasionally of headache, was most frequently drowsy and very talkative during the day and very anxious to get up. She remembered what occurred before the accident but nothing since. Recognised her friends but soon forgot the visit which they paid her. There was now no discolouration over the mastoid, but there was some œdema over the process and also over the site of the bruise, where it was more evident. On the 29th she was talking much more frequently both day and night and invented stories. No pain anywhere. After this she continued in much the same condition mentally until discharged on Feb. 10th, 1889, her condition being that of a very weak minded person, garrulous to a degree, and her memory very bad. Beyond a rise to 99·8° on the morning of Dec. 30th, the temperature was always below 99°, and during the second and third weeks it was subnormal.

Some patients were sent away from hospital in the first instance and afterwards readmitted; occasionally their injuries proved fatal. In the following case the result was unfortunate, as the patient died at home after having been sent away, and the hospital authorities were censured.

On Feb 3rd of this year a patient aged forty-two, who applied at one of the large London hospitals, having been taken there by the police, was refused admission by the dresser on duty because he thought she was drunk. At the inquest which was held subsequently, he said she was suffering from a wound at the back of the head, as well as from symptoms of intoxication. She was proved by others to have been sober before the accident, but to have had a little gin. In the police-station to which she was taken she was "obstinate, and acted like a drunken woman." She became unconscious during the night, and I am indebted to Dr. H. E. Richardson, who attended her later, for notes of the case. He saw her at 8 A.M. on the 4th; she was in a state of coma with stertor and dilated pupils; there was a dark-coloured serous discharge from the mouth. There was a lacerated and contused wound one inch and a half long, just above the occipital protuberance, completely dividing the scalp. The periosteum was not separated, so that no fracture could be detected. She remained comatose until her death next day. At the necropsy a fracture was found running vertically (as shown in Fig. 15) from about an inch above the wound and across it; here it was a mere fissure, which could only be seen by separating the periosteum. As it extended to the base of the skull it separated to about one-eighth of an inch, and, dividing, passed on either side of the foramen magnum. There was a clot at the lower part of the fracture about the size of a walnut. The whole of the surface of the brain was intensely congested. The frontal lobes were severely bruised.

If we search the pages of THE LANCET for confirmatory evidence, as Mr. Leonard Bidwell has done, we find other cases of a similar kind.[5] A curious phenomenon, and one

FIG. 15.



Fracture in the posterior fossa of the skull. (After a sketch by Dr. Richardson of the bones in his case.)

to which I should hardly direct your attention were it not very marked in the cases in which it was observed, is the coughing up of a very large amount of frothy mucus, which the patient has much difficulty in getting rid of, the mouth becomes clogged and the respiration embarrassed. The first case in which it excited my attention was in 1886; it then occurred on the second day after the injury; in another case it occurred on the twelfth day, in another on the third day. Two similar ones are recorded in THE LANCET of 1847 and 1868. In none was there any evidence of bronchitis. Four were fatal, and in these there was a fracture of the posterior fossa in each instance, but no mention is made of any injury to the eighth nerve.

Cause of death.—I have had a table constructed, showing the cause of death in fifty-four cases of fracture of the base. In this it will be seen that the shock of the injury proved fatal in four; that the shock of the injury, combined with that resulting from other injuries, such as fractured ribs, was fatal in six. One patient died in convulsions within the hour after admission; four with arachnoid hæmorrhage at varying periods; thirty-two from cerebral contusion, with laceration and hæmorrhage; three from meningitis at the end of the second week; one, aged four, from uncontrollable vomiting; whilst the impaction of partly digested food in the pharynx produced asphyxia in another; delirium tremens proved fatal in one case; and only one, a patient with compound comminuted fracture of the skull, died from septic disease. Thirty of the cases died within a day after admission to the hospital. The most striking fact shown by this table is the large proportion of cases dying as a result of injury to the brain, more than half of the total number; and it is of interest to observe that the whole of the eleven cases in

[4] Science and Art of Surgery, vol. i., p. 752.

[5] Dr. Hunter (Littleport): THE LANCET, vol. ii. 1881, p. 788. Mr. Spanton: Ibid., vol. ii. 1877, p. 313. Mr. Hunt: Ibid., vol. i. 1880, p. 671. Dr. Heuston: Ibid., vol. ii. 1887, p. 119. Dr. Basham: Ibid., vol. ii. 1842-3, p. 945.

which the fracture of the base was strictly limited to the posterior fossa (if we include one accidentally omitted from the table) presented a similar condition of contused brain, with hæmorrhage as the cause of death. Another fact is the extreme fatality of these fractures in the posterior fossa; exactly one-half of the series of twenty-two proved fatal, a proportion far beyond that met with in other fractures of the base, which, as shown by these tables, is 25 per cent. for the anterior, and about the same for the middle fossa. In this series of cases, both fatal and non-fatal, the proportion of fractures in the posterior fossa, with regard to fractures in the other fossæ of the base, is larger than that usually observed, and there are two reasons for this. One is, that I have been paying special attention to fractures in the posterior fossa during the last two years, having been to St. Thomas's Hospital when kindly informed of a case by Mr. Robinson, the resident assistant-surgeon, or Mr. Solly, the surgical registrar. Another is, that one is most frequently called to this class of case on account of the supervention of symptoms of compression due to cerebral hæmorrhage. So that, although the ratio of mortality is accurate as regards fracture in the posterior fossa, the relative proportion of such cases to the others is larger than that met with by a surgeon paying attention equally to all fractures of the base for a similar period.

TABLE III.—SHOWING THE CAUSE OF DEATH IN 54 CASES OF FRACTURE OF THE BASE OF THE SKULL.

CAUSE OF DEATH.	DURATION OF LIFE.															
	Died on admission.	Hours:—Lived under					Days:—Lived under									
		1	2	3	6	12	1	2	3	4	5	6	7	9	10	12	14
4 from shock	1	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6 „ shock and other injuries	—	2	—	—	2	—	2	—	—	—	—	—	—	—	—	—	—
1 „ convulsions	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4 „ arachnoid hæmorrhage	—	—	1	1	—	1	—	1	—	—	—	—	—	—	—	—	—
32 „ cerebral contusion, with laceration and hæmorrhage	—	—	2	2	2	4	6	4	5	2	1	—	1	2	1	—	—
3 „ meningitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	1

1 died under the hour, from asphyxia; 1 on the sixth day, from persistent vomiting; 1 on the tenth day, from delirium tremens; 1 on the fourteenth day, from erysipelas and pyæmia.

Justice could not be done to the question of treatment in the short time at my disposal, and I would merely refer to the importance of keeping patients at perfect rest after these injuries to the head, and urge that the administration of purgatives is not enough; the wellbeing of the patient depends largely on the free action of the bowels being secured.

Venesection has gone largely out of use during the last forty years; but in the earlier part of the century it was employed in cases of fracture of the base to an extent which to us appears startling. Thus, in 1828, we find a surgeon severely criticised for not having bled a patient on the second day instead of on the third; the man had received a large scalp wound and fracture of the vault extending into the base. In 1827 we read that a man under the care of Abernethy was bled to the extent of 120 ounces in the twenty-four hours and recovered, and that surgeon speaks highly of venesection and the administration of calomel. It was a common custom to bleed the patient to a considerable extent daily, and one is not surprised to find that the recorded cases of fracture of the base of the skull were usually fatal ones. But we are now, I think, too much inclined to neglect what in suitable cases appears a most valuable remedy, especially when the patient is a big strong robust man and is suffering from great restlessness. Under such circumstances the abstraction of ten or twelve ounces of blood from the arm may effect a marked, though perhaps but a temporary, improvement in the condition of a patient. The application of leeches behind the ears or to the temples, or the local abstraction of blood in some other way in certain of the cases where severe headache was complained of during the first few days after the injury, often gave great relief to the pain. In the more chronic forms of headache the use of a seton in the nape of the neck appeared to effect marked improvement in the course of a few days.

When we regard the large number of patients who die from cerebral injury with hæmorrhage from the part of the brain lacerated, the question arises why the use of the trephine is not more often resorted to as a means of relief. The improved methods of operating, the slight increase of risk that is caused by the operation itself, and our enlarged knowledge as to the local condition in such cases urge the performance of the operation, and at an early date. True, there are many factors against success, both in the condition of the brain and the general condition of the patient; but I would suggest that the cause of death is usually the presence of the blood-clot, and not the contusion of the brain. We are hardly in a position to state what extent of contusion and laceration of the frontal and temporo-sphenoidal lobes is incompatible with life. The operator must be guided by his knowledge of the effect of these injuries on the brain substance, and recollect that the fatal hæmorrhage will usually be over that part of the brain directly opposite to the part struck, and not immediately underneath it.

And now, gentlemen, in concluding this my last lecture, I thank you for the kind attention you have given to what I have had to say, and would remind you that if there is anything in the lectures that you have heard of more than fleeting interest, and I think there is, your thanks are due not to me, who am merely the mouthpiece, but to those gentlemen who kindly gave me permission to use the cases that have formed the foundation of the lectures, without which it would not have been in my power to bring before you for consideration these points relating to injuries to the head.

ABSTRACT OF THE

Cavendish Lecture

ON

UNRECOGNISED LESIONS OF THE LABYRINTH.

Delivered before the West London Medico-Chirurgical Society, June 6th, 1890,

BY ALEXANDER OGSTON, M.D., C.M.,

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IN nearly all the lectures that I have read or listened to, it has been strongly impressed upon me that those dealing with wide and general subjects, however interesting and admirable they have been as evidences of close acquaintance with or deep insight into our professional knowledge, have yet proved comparatively barren of good and eventually unprofitable, as contrasted with those that dealt with some limited subject regarding which the speaker possessed some special knowledge derived from his own study and observation, or treated from a point of view in advance of those who had preceded him over the same ground. I have, therefore, ventured to select, as the least unworthy tribute I can offer to so distinguished a society, the consideration of some diseased conditions of the internal ear or labyrinth, a subject that is of growing interest to the modern physician and surgeon, and the importance of which is pressing itself on us

the more strongly as years flow by, and discoveries ripen in our science. It is scarcely, I believe, an exaggeration to say that, concerning the labyrinth, its functions and diseases, we know little more than that in health it enables us to hear sounds and distinguish tones, and that it is sometimes affected by the following diseased conditions—viz., (1) congenital deafness, resulting in deaf-mutism; (2) deafness acquired in middle or advanced life, called nerve deafness; (3) a disturbance of hearing known as tinnitus aurium; and (4) the disease described by Ménière, characterised by deafness, vertigo, and vomiting, and termed aural or labyrinthine vertigo, or often Ménière's disease. In the domain of surgery increasing interest in Ménière's, and other diseases of the ear, is being awakened by the improved diagnosis and increasing frequency of operative interference in intra-cranial lesions; and everything at the present time favours a more extensive study of all affections of the ear, and particularly of the nervous portion of it contained in the labyrinth. It has chanced that circumstances have directed a considerable amount of my attention to affections of the labyrinth, and that I have been fortunate in being able minutely to study some conditions which have not, so far as I am aware, been attended to or investigated hitherto. Among elderly or middle-aged persons, known to possess gouty or chronic rheumatic tendencies, or in whom, from their occupation and mode of life, these conditions may be assumed as probably existing, attacks of what I may call serous effusion into the labyrinth, with increased intra-labyrinthine pressure—a process analogous, in fact, to glaucoma of the eyeball—are, if I am not mistaken, neither uncommon nor unimportant.

The individual usually observes that some morning, without any observable cause, he suffers from the feeling of tension in one ear. The feeling is peculiar. It gives the sensation of being produced by a small cause, like a drop of fluid, and is felt deep in the ear, seemingly an inch and a half from the meatus, towards the centre of the base of the skull. Generally the patient imagines that both ears suffer, but one much more than the other, so that, while a little observation convinces him that one ear is much the worse of the two, he feels as if the other were affected in the same manner, but to a lesser degree. This may be due to sympathy between the two sides. The discomfort usually rapidly augments during the first six or eight hours that follow the onset, the sense of distension becomes severe, even alarming, and so engrosses the patient's attention that it unfits him for work or society, and renders him anxious, preoccupied, and desponding. Coincidently the following additional symptoms are observed—viz., deafness to sounds and noises in the ear. The hearing is impaired, as if the ear were closed by wax or a plug of cotton wool. When the range of hearing is tested it is found that a watch, heard by the good ear at twenty-five feet, is now audible on the affected side at a distance of only two feet, or perhaps even six inches or less, a loss of from eleven-twelfths to forty-nine-fiftieths of the power of hearing. The voice, as is usual in deafness, is better heard, and is not so accurate a means of testing the diminished sensation. This deafness gives rise to a singular phenomenon in the region of the external auditory meatus. When in a normal ear the finger is brought into contact with the skin around the meatus the individual both feels and hears the contact. If the deafness described is present, the contact of the finger is *felt* as usual, but is not so distinctly *heard*, and hence for three-quarters of an inch in front of and below the meatus, and over nearly the whole pinna, when the finger is rubbed gently so as to stir the fine hairs and the skin, the patient feels as if the part touched were benumbed in marked contrast to the sound ear, where the usual familiar sensation is perceived. The numbness described is not a symptom peculiar to disease of the labyrinth, as anything that interferes with the conduction of sound to the internal ear will equally produce it. It can be caused by plugging the external auditory meatus pretty firmly with cotton wool, and it may also exist where unusually large collections of cerumen block it up. It will not be well made out, however, in any condition unless the interference with hearing be considerable, and hence it is slightly marked or absent during the milder attacks of effusion into the labyrinth, and also in the severer attacks when the great degree of deafness accompanying their early stages is passing away. The noises in the ear are especially prominent in a first attack, and vary almost infinitely both as to quality and degree. They are continually altering during the progress of the disease, as it improves or becomes worse changing from day to day, and even from hour to hour. During the first day or two they are worst and loudest, often assuming the form of deep cathedral bells struck close to the ear, and the vibration of every stroke is felt, as it were, shaking the labyrinth and causing a sense of discomfort *approaching* that of acute pain. Or the tinnitus may, at other times or in other cases, be continuous, producing exactly the sensation experienced when one stands in the close vicinity of a circular saw cutting through a log of wood. This particular form is the one most irksome to the patient. Or a sound like that of the sea may be present, particularly in the milder cases, in subsequent attacks or in the first attacks after the louder sounds have passed off. The continuous roar, surging, or hum that is felt is exactly like that perceived on covering the ear with a shell. It is steady, continuous, and unintermitting, without waves of increase or decrease. This is a form of which patients do not complain much. Lastly, it may resemble minute bells. This is generally the case during improvement or in subsequent attacks, and is particularly noticed if the patient should chance to go into some quiet room where great stillness reigns, when he seems to hear the ringing of a fine silvery metallic bell struck with great rapidity, like a very distant electric bell which is vibrating in the affected ear. More than one of these various forms of tinnitus may be present at the same time. It is, perhaps, well to remark that, distressing as the symptoms may be, no real pain is ever experienced. While these sounds are fading from the severer to the milder forms the patient is aware of improvement in the feeling of tension. The first distress from this cause grows less, and finally it disappears, and during its diminution the patient usually becomes aware that his other ear is not affected, as he at first supposed it to be. The deafness, as tested by the watch, also lessens, and the furthest hearing point extends to four and twelve feet, and so on to normal, or nearly so; but a very careful measurement will almost always prove that, however slightly, a permanent defect persists. During the first few days of the attack the patient has usually difficulty in falling asleep, owing to the irritating noises in the ear, but in the morning the tinnitus is usually much diminished or entirely gone, and it is only on his moving or rising that it and the tension recommence, and quickly resume nearly their former intensity. During the stage of labyrinth distension every sharp noise causes a momentary vibrating discomfort amounting almost to pain, the sensation being somewhat similar to that experienced when a cannon is fired near the ear, although less in its intensity. Every movement that agitates the body, such as driving, railway travelling, shooting, and even walking, increases the sense of fulness and the tinnitus, while avoidance of such causes improves them. Blowing the nose and stooping aggravate the symptoms, and will temporarily reproduce them where they are passing off. I have never found that the patient was, during the attacks, absolutely deaf to any sound of an ordinary nature—that is to say, he retained his power of recognising all ordinary noises that were not musical sounds, his deafness to them being only relative, so that when they were sufficiently near his ear to be heard, he recognised their nature accurately.

Though our present means of testing perception of musical notes are most unsatisfactory, and though an ordinary piano and the tuning fork failed to give any positive result, yet with Galton's whistle a defect was always found; at the upper end of the scale a deficiency of about eight or ten numbers was usual, and at the lower end a defect of ·5 to ·8 was clearly made out; the patient heard the hiss of the whistle at these parts, but did not hear it as a whistle or musical note. So far as I could test it, I generally failed to find that the musical sense was altered; for the power of recognising harmonies and discords, and of naming the individual notes struck on an instrument, seemed to be fully preserved. But this preservation does not seem to be invariable, for Dr. Alexander Bruce of Edinburgh, informs me that he had a patient whose musical sense had become perverted, and in one of my own patients also it was found that a disturbance of the musical sense had occurred. During the first attacks, and in such of the following ones as are severe, the inflammation occasionally extends in a slight form outwards, so as to show for a short time evidence of its invasion of the middle ear. The occurrence is shown by the slightly moist sounds detected with the otoscope when the middle ear is inflated by

Valsalva's or Politzer's methods, and simultaneously auscultated by the otoscope; they are heard as a slight squeak upon inflation, instead of the dry bladder-like crackle of the unaffected side. There is also sometimes a sort of tremolo sound, heard by the patient with certain notes It should be borne in mind that not only may the attacks vary much in severity, but that the symptoms complained of may also vary. Sometimes the attacks are so severe as to remind one of Ménière's disease, to which, it will be observed, the symptoms bear a considerable resemblance. On the other hand, they are often so slight that they fail to inconvenience the patient as to induce him to complain, or the physician consulted may deem them of small importance. One patient will complain most of the giddiness, another of the tinnitus, a third of the deafness, and a fourth of the distension; and even in the same person considerable variation in the prominence of the individual symptoms may be found in the different attacks. The attacks that most invite attention are those accompanied by giddiness, which may be so pronounced as to be a most serious inconvenience to the patient, and to give rise to suspicions of incipient brain disease.

The first attack passes off in a few weeks and leaves the patient well, though still affected by the fine defects of hearing already noted. Probably a long time elapses, a year or more, before the second attack appears, and it is usually milder than the first. At intervals of perhaps a year or so, the patient experiences renewed, but mild, attacks, until, after ten years or more have passed, the hearing has become so greatly defective that the patient is observed by those around him to be deaf to the sounds of ordinary conversation. I have not met with a case where it terminated in absolute deafness, but suppose this may occasionally occur. The attacks tend to be confined to one ear, but not uncommonly the second ear is involved in the same manner. No determining cause for these relapses can be assigned, but the patient, as years pass on, shows other evidences of the gouty diathesis, such as attacks of gout or gravel, chronic rheumatic changes, or gouty thickenings of the cartilages of the pinna. I believe I have observed that these persons lose the power of properly balancing themselves, and in some there has been an inequality in the caligraphy on different days, it being sometimes very good, and next day perhaps rather shaky and unsteady. The loss of the high notes is never quite regained; but there are in nature so few high sounds that are important that the loss may not be perceived. From the assemblage of symptoms it seems impossible to draw any other conclusion than that the disease is an effusion into the labyrinth, accompanied by increased pressure within it, a sort of inflammatory hydrops of the part. I have had no opportunity of studying by dissection the changes occurring in it, and can only suppose that these may be effusions of serum, perhaps gouty deposits, and slight atrophic changes if the nerve structures. The disease is evidently entirely independent of catarrhal processes in the middle ear; the latter causes a thickening of the mucous membrane of this region, which impairs the power of conducting sounds quickly and accurately to the labyrinth. Hence it results that if, as is usually the case, one ear be predominantly or alone affected, a given sound tends to reach the two labyrinths at different moments, and an impure sound is heard. Particularly with high whistle notes does this hold good; and, if the patient be instructed to listen to the sound produced by his own lips when he whistles a single very high note continuously, he will generally observe that it is heard as a wavering or tremolo note, should his disease be otitis media, while it will be heard as one clear note in labyrinthine effusion, where the conducting structures do not suffer. As already mentioned, however, in severe cases of the latter disease the inflammation may extend outwards and affect the fenestræ, so that a tremolo note may be observed about the second or third day. This is, however, merely a faint and temporary occurrence, and soon subsides. The diseased conditions which I have described above seem to be far from uncommon, and the treatment not so efficacious as could be desired. Inflation of the middle ear aggravates the symptoms, while rest in all its forms is distinctly beneficial. Quiet in bed for a few days, at least, should be insisted on, and to protect the labyrinth by deadening all the vibrations that reach it firm plugging of the meatus on both sides with cotton wool is most efficient, and is felt to give ease and accelerate the subsidence of the attack. When the symptoms have subsided the patient may be permitted to rise and go out, avoiding exertion as far as possible. The cotton wool and other precautions can, as a rule, be discontinued in a month or two. It is questionable if iodide of potassium and anti-rheumatic remedies do good, and the same may be said of counter-irritation over the mastoid. The administration of pilocarpine is likely to be useful. General regimen, likely to combat the diathesis, seems to lessen the frequency of the attacks and diminish their severity, so that the patient becomes more contented with his condition, and suffers less severely and at longer intervals.

A well-merited reputation would be gained by anyone who would accomplish for the ear what Helmholtz and Donders did for the eye, by formulating the range of its powers in health and disease. At present we have not even a standard for testing the distance at which the ear perceives a given sound. The watch and the voice, which are usually employed, are very crude tests for hearing, and totally fail in estimating small defects. Itard's and Politzer's acuometers and other such instruments have generally been abandoned as useless. The sonometer of Hughes, a species of induction microphone, in its present form is also quite unsatisfactory.

Lichtwitz of Bordeaux has advocated the employment of Edison's improved phonograph for testing the perception of sound in cases of deafness, and he has composed a scale to be employed with it, but it remains to be seen whether it possesses the advantages claimed for it. I do not think a better illustration could be given of the imperfection of our methods than the fact that it is not generally known that the field of hearing of a normal ear has its limits in lateral directions, and that points of greater and less acuteness exist in it. I give the measurements taken of the normal left ear of one of my patients who suffered on his right side from labyrinthine disturbance. They correspond to other measurements taken of normal ears, and, I think, represent tolerably accurately what is usually found in health. When the imaginary line joining his two external auditory meatus, which I may call the meatus line, was directed horizontally, and a watch was placed in the prolongation of this line at a distance of ten feet from his good ear, at which point he could just distinctly hear it, it was found that when the watch was moved forwards to a situation fifteen degrees in front of the meatus line, it was there heard at a distance of fourteen feet. In testing further, it was found that if the watch were moved forwards to an angle of forty degrees in front of the meatus line it was there heard only at six feet, and at fifty-five degrees only at three feet. The back part of the field showed a slow decrease of the range of hearing, the watch at twenty-five degrees backwards being heard only at six feet, and at forty degrees backwards at five feet, beyond which the range fell to three feet and less. So that the patient's field of hearing embraced only ninety-five degrees of a circle, its point of greatest acuteness being fifteen degrees in front of the meatus line.

When the hearing in the vertical plane was next examined, it was found that here also the sound was not best heard when opposite the meatus. It was there audible at ten feet, while at fifteen degrees above the range diminished to eight feet, forty degrees above to six feet, and sixty degrees above to three feet and less; but below it slowly increased for thirty-five degrees, at which point it reached twelve feet, diminishing them to ten feet at forty degrees, and to three feet and less at fifty degrees. It is possible that the distribution of the range of hearing, and its inequality in different parts of the field, may aid us in the perception of the direction from which sound reaches our ears. The shape of the field and its relation to the meatus bear evidently some relation to the form of the pinna and external ear.

The alterations that take place in disease are of considerable interest. This I may illustrate by taking the right ear of the same patient whose measurements have just been given and contrasting the results in the two ears. The most sensitive point in the vertical plane was found to be fifteen degrees above the meatus line in place of thirty-five degrees below in the normal ear. To ascertain his hearing in the horizontal plane it was found best to start not from the meatus line, but from the most sensitive point—i.e., fifteen degrees above it, as this rendered it easier for the different zones of distinctness of hearing to be made out. It was then found that twenty degrees in front of this point the hearing was most distinct. This

singular alteration of the field of hearing and the point of greatest distinctness I am inclined to attribute to the affection of the labyrinth, because the middle ear and drum were perfectly healthy, and the external meatus was of normal shape and free from cerumen, and the cause was, therefore, not an external one. It may possibly be a cause of difficulty in localising sound.

Galton's whistle is the only musical test that I have found to be of any service in testing the perception of musical notes. It is singular that, in disease at least, the field of hearing for musical notes does not correspond with that for ordinary sounds. In the case just quoted, where the field for ordinary sounds on the diseased right ear is given, measurements with the Galton's whistle gave on the same ear a different field. The whistle was first set to the highest note audible by the diseased ear, and then carried to different parts of the field. The result was that it was audible over the upper part of the field ten degrees above the meatus line to an angular distance of thirty to forty degrees peripherally above, before, and behind the meatus line, while below that as well as in parts of the field more peripheral than forty degrees above, before, and behind, the *note* was not heard, but it had lost it musical character, and was heard as a hissing noise. All these measurements were made with the whistle placed at a distance of six inches from the meatus. As to what concerns the musical sense, or sense of harmony, how far it may vary in different persons, and be affected by disease, and how far, if at all, it is capable of being improved hy cultivation, we are in complete ignorance. Its study is surrounded by difficulties, but they can scarcely be insuperable. The question of the possible accommodation for sound by the pinna and conducting apparatus of the ear, and, if it exist at all, its normal range and how it may be impaired, is one that has never yet undergone a proper investigation. Apart from what may be done by merely directing the ear in its most sensitive direction, I believe that accommodation for sound does not exist. It may, however, be the case that some persons, who possess unusual power over the muscles of the pinna, may be able to accommodate for sounds too faint to be heard without accommodation, by means of these muscles and the stapedius, which also derives its supply from the facial nerve. When we find so many of our younger physiologists and other investigators engaged in the study of subjects that are in themselves almost, if not altogether worthless, but to which nevertheless they devote months and years of labour and genius, it is surely not too much to hope that the dark province into which I have strayed, and which so sorely needs the measuring rod of the surveyor, will soon undergo a scientific exploration and investigation. Its intimate relation to cerebral physiology and symptomatology renders such an inquiry at the present moment highly important and necessary. If it should happen that these remarks direct attention to the existence of this great want, and contribute to induce some investigator to endeavour to remedy it, I should certainly feel that my having undertaken to deliver to you the Cavendish lecture this year will have been justified beyond my hopes.

A NEW OPERATION FOR PROLAPSUS OR PROCIDENTIA OF THE RECTUM.

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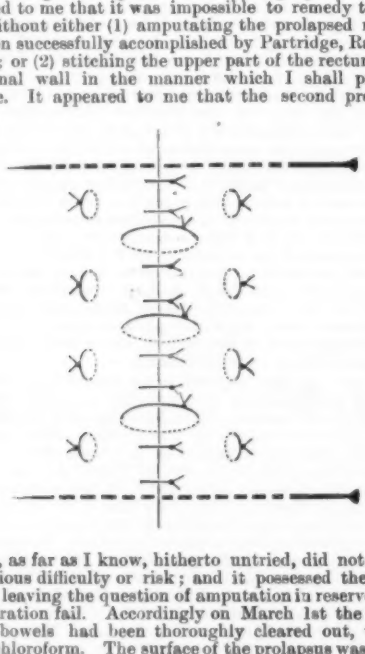
CASES of complete prolapse or procidentia, or extroversion of the rectum, in young adults, appear to be much more common in India than in Europe. The rectum in these cases is simply turned inside out. Its mucous membrane constitutes the covering of a large conical tumour projecting from the anus; all the coats of the viscus are extruded, and the protrusion consists of a hollow bag, the centre of which is occupied by a portion of the sigmoid flexure, in front of which there is a peritoneal sac—the recto-vesical pouch,—into which descend small intestine and omentum as into a hernial sac, while behind it there is a mass of meso-colon which has descended along with the gut. An attack of dysentery is generally the earliest provocation of prolapse, which gradually increases in length and bulk. As long as the sufferer is able to return the protrusion he endures the inconvenience, and refrains from seeking for relief or cure. But the time comes when he finds that he cannot reduce the mass, or it may happen that the sphincter becomes so dilated and paralysed that descent takes place on the slightest exertion. In either event he finds it necessary to resort to a hospital. Sometimes resort is delayed for many days after irreducibility has been established, and in these cases ulceration, sloughing, or gangrene is apt to occur, the opposed peritoneal surfaces become glued to each other by the inflammation underlying the destructive process, and reduction becomes either unsafe or impossible. In two such cases amputation of the prolapsed mass has been successfully resorted to by Mr. S. B. Partridge and Mr. O'C. Raye.[1] In both these instances the peritoneal pouch was exposed, divided, and stitched, and the operation was successful in radically remedying the infirmity. In cases of more recent prolapse reduction can be effected without much difficulty; and by means of gentle laxatives, recumbent defecation, and support by pad and bandage, a recurrence of the prolapse can be prevented, at any rate as long as the patient remains in hospital. In more aggravated cases, linear cauterisation of the rectal mucous membrane and anal verge, or the removal of portions of the mucous membrane by clamp and cautery, procure the same result; but whether the relief conferred is permanent or not it is impossible in most cases to say, as the patients on leaving hospital return to their distant homes and are lost sight of. Instances are occasionally met with in which these measures signally fail, and life is then rendered miserable by constant descent of the mass on the slightest provocation. Mr. Frederick Treves has recently proposed to resort to amputation of the prolapse as a means of radically curing such aggravated and otherwise irremediable cases.[2] He has related three instances in which this procedure appears to have had a successful issue. His paper has given rise to some controversy, and doubts have been raised as to the propriety of resorting to such a serious mutilation, and as to the eventual success of the measure. In the following case of aggravated procidentia, the milder measures above mentioned were tried and failed, and an operation was then performed on the same principle as Alexander's operation for procidentia uteri, by which prolapse was prevented by fixing the upper part of the rectum above the pelvic brim. The details of the case are as follows:—

P. C. G——, a Hindu youth aged nineteen, of slender frame and pallid aspect, was admitted into the Medical College Hospital on Jan. 27th, 1890, for very aggravated prolapse or extroversion of the rectum. This malady commenced eight years ago, after an attack of dysentery. The protrusion of the bowel was at first slight and easily reduced by the fingers. It occurred on every occasion of evacuating the bowels. Gradually the bulk of the protruded mass has increased until it attained its present size. His bowels are moved as a rule once a day. The prolapse first takes place with straining, and then from the apex of it hard stools are forced out with much effort. The mass is then reduced with much difficulty. On admission, the fully prolapsed mass was found to measure 6 in. in length and from 11 in. to 12 in. in circumference. The sphincter was greatly relaxed and quite devoid of tone. The mucous membrane was congested and tumid, traversed by dilated veins, and bled easily. Reduction was a slow and somewhat difficult process. The part which had descended last—namely, the apex of the lump—was first pushed back, and after about two-thirds of the mass had been reduced the rest followed quickly, and no descent occurred while the patient lay in bed until the next stool. The lad's health was delicate, liver somewhat congested, and spleen enlarged. He was thin and anæmic, and had an anxious and distressed look. Urine healthy. He was treated for a few days with mild laxatives, strict recumbency being enjoined; but the prolapse occurred whether the motions were soft or hard, and whether he sat or lay. On Feb. 1st he was put under chloroform while the prolapse was complete. The surface of the extroverted rectum was carefully washed and dried with a soft cloth, and seven linear eschars were made with a cautery at a red heat from base to apex of the conical mass. The prolapse was then reduced and a morphia suppository inserted. Two grains of opium were ordered to be given

[1] See Indian Annals of Medical Science, No. xxvii., p. 237; and THE LANCET, July 10th, 1886, p. 72.
[2] Vide THE LANCET, Feb. 22nd and March 1st, 1890, pp. 396 and 451.

every six hours, and a diet of milk and sago prescribed. There was slight depression, followed by some reaction after this procedure, but the constitutional disturbance was not severe. The primary effect of the cauterisation appeared to be favourable. For ten days, during which he had daily motions, the protrusion was slight, and, on completion of the evacuation, disappeared of itself without manipulation. On the 11th manual reduction had to be resorted to. The eschars now separated and linear ulcers took their place. These were stretched, and bled when the prolapse occurred. Reduction was effected with greater difficulty and pain, and his condition was miserable in the extreme and getting worse. On the 28th he was put under chloroform for the purpose of examining the parts more carefully with a view to future proceedings. The conditions above described were found to exist in a very pronounced degree. The prolapse was reduced, and the oiled left hand introduced with the greatest ease through the dilated sphincter and the pelvis into the cavity of the abdomen. The sigmoid flexure was found to be greatly dilated, and no intussusception, or twist, or other abnormality was discovered. The abdominal wall was thin, and the fingers of the hand which was within the bowel could be made prominent above Poupart's ligament in the left inguinal region. On reflecting upon the case, it appeared to me that it was impossible to remedy the infirmity without either (1) amputating the prolapsed mass, as had been successfully accomplished by Partridge, Raye, and Treves; or (2) stitching the upper part of the rectum to the abdominal wall in the manner which I shall presently describe. It appeared to me that the second procedure,



though, as far as I know, hitherto untried, did not involve any serious difficulty or risk; and it possessed the advantage of leaving the question of amputation in reserve should the operation fail. Accordingly on March 1st the patient, whose bowels had been thoroughly cleared out, was put under chloroform. The surface of the prolapsus was washed and bathed with a 1 in 40 carbolic lotion. The prolapse was then reduced, and the left hand passed into the abdomen. The fingers were made prominent above Poupart's ligament, and care was taken to remove the small intestines inwards. A long steel acupressure needle was now passed through the abdominal parietes into the cavity of the gut, guided across its interior by the fingers, and passed outwards until it emerged about three inches from the point of entrance. This needle was placed parallel to and about one inch above Poupart's ligament. Another needle was inserted through the bowel and abdominal wall about three inches above this one, and rather external to it, so as to secure the intestine in an oblique position from below upwards and outwards. The upper end of the rectum or lower end of the sigmoid flexure—it is impossible to say which—was thus temporarily fixed in the desired position by these two needles. The hand was now withdrawn, and the permanent stitching proceeded with. An incision about three inches long was made between the needles at right angles to them, and in the long axis of the intestine as near the middle of the applied part of it as possible. The layers of the abdominal wall were divided carefully to the same extent one by one until the parietal peritoneum was reached. This bulged somewhat through the wound. The left hand was now reintroduced into the interior in order to avoid puncture of the mucous membrane, and, guided by the fingers, in the inside of the gut two series of loops of silk thread were inserted, four on each side, with a handled needle, in the manner described by Mr. H. G. Howse in the article on Gastrostomy in Heath's Dictionary of Practical Surgery,[3] at a distance of about an inch apart, so as to attach the serous and muscular coats of the intestine to the abdominal wall. A series of these loops, also penetrating the two outer walls of the intestine, were placed between successive pairs of these rows in order to bring the lips of the wound together, and between these smaller horsehair stitches of adaptation were inserted. The whole procedure was conducted under careful antiseptic precautions, and an antiseptic dressing was applied. The patient bore the operation well. A morphia suppository was inserted into the rectum, half a grain of opium ordered to be given every third hour, and a diet of milk and beef-tea alternately prescribed. The arrangement of the pins and stitches is roughly indicated by the accompanying diagram. The progress of the case was eminently satisfactory. The operation was followed by neither depression nor reaction. The temperature remained normal and pulse quiet for eight days. He passed no stool during this period, but voided flatus freely. There was no tympanites or any abdominal tenderness, except in and around the area of operation. He passed urine easily from the first. The wound remained aseptic, and healed by first intention throughout. The steel pins were removed after twenty-four hours. They were blackened, but had no fæcal odour. On the 9th the horsehair stitches were removed and some of the silk stitches. The rest were simply divided, as they had begun to cut the skin. The rectum was examined by the finger and found to be full of lumpy fæces, which were removed with a scoop. The temperature on the afternoon of this day ran up to 104°, and the abdomen became somewhat tympanitic. On the morning of the 10th he was still feverish, temperature 101·2°, and the abdomen distended with flatus. All the stitches were removed, and a carminative mixture ordered. He had repeated attacks of bilious vomiting during the day, and the tympanites gradually subsided. On the 11th the temperature continued to fall to 99°, and the bilious vomiting did not recur. The abdomen became flat and painless. On the 12th the temperature was normal, and continued so henceforth. The rectum was found to be full of fæces, which were removed by a stream of water introduced by means of an elastic catheter. On the 14th he had a soft formed stool spontaneously, another on the 15th, and a very large evacuation on the 16th. One ounce of olive oil was injected to facilitate easy passage of these stools. On the 17th the rectum was examined, and found to be in proper position. The longitudinal ulcer had healed; the sphincter had regained its tone, and contracted tightly on the finger; no sign of prolapse. He can now be allowed to take soft solids and vegetables. On the 23rd half an ounce of castor oil was given, and he had a very large motion on the 25th, without prolapse. He was now allowed to walk about. Since this date he has had regular motions without any discomfort. He has put on flesh, looks better, and is contented and cheerful. On April 8th half an ounce of castor oil was administered, and he was told to pass his motions in a sitting posture. The result was five liquid stools, which were passed without any protrusion. The rectum was again examined by finger, and found to be in good position. He was shown to the Calcutta Medical Society on the 9th, and allowed to go to his home on the 11th.

This case was in many respects favourable for operation: the patient was thin, the rectum admitted of the introduction of the hand very readily, the prolapse was capable of easy and complete reduction, no other abnormal condition existed, and he bore opium well. There can be no doubt or question regarding the success of the operation, and the absence of any inconvenience or complication which the operation might be reasonably supposed to cause. Whether the cure will be a permanent one, or whether the operation is capable of being carried out with equal facility and equal success in other cases, remains to be seen. As the question of the operative treatment of this condition is now under discussion, I have thought it advisable to place the facts of this case on record as soon as I was in a position to note the result of what appeared to me, when I undertook it, to be a novel and somewhat doubtful experiment.

[3] Vol. i., p. 591.

TWO CASES OF ARSENICAL PERIPHERAL NEURITIS.

BY SAMUEL BARTON, M.D.,
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CASE 1.—Mrs. A. G——, aged twenty-three, mother of two children (one alive, the other died three hours after birth), was admitted under my care to the Norfolk and Norwich Hospital on Nov. 23rd, 1889. She was conveyed on a stretcher to the ward, as she was totally unable to walk or even stand. She had enjoyed good health, with the exception of suppurating tonsillitis, which occurred for the second time three years ago, when an attendant at the county asylum. There was nothing in the family history bearing on her state. The present attack began on Sept. 28th; the only cause that she could suggest was that she had recently been much frightened by a thunderstorm. She was at this time in her seventh month of pregnancy. The attack began with a severe headache referred to the occipital region. This initial symptom lasted forty-eight hours. On the third day on getting out of bed green vomiting set in, followed by copious watery diarrhœa. This state continued until the sixth day (Oct. 3rd), when she was prematurely confined, the child only surviving three hours. Within a few days the patient noticed that the fore-fingers of both hands were numb; this numbness soon extended to the other fingers, and when she got up on the tenth day after confinement both hands and wrists were numb and tingled. Within the following week the same sensations were felt in both big toes, which gradually extended as far as the knees. She said she distinctly noticed the numbness for some days before the tingling and burning pain began. She soon after began to lose power in the hands and legs, and within three weeks of the beginning of attack could not hold anything in her hands, nor could she stand even with assistance, but could sit erect all day, and had perfect control over sphincters. Briefly her state was as follows on admission: loss of power to extend the hand, great weakness of flexors of the wrist. Dynamometer registered, right grasp 5, left grasp 10; loss of power of ankle dorsoflexion, slight power to extend foot at ankle involving much pain in the calf muscles. Very little power of quadriceps to extend the knee; hamstrings were in a state of semi-contraction. No muscles supplied by the cranial nerves affected, nor muscles of trunk; sphincters normal; great hyperæsthesia of forearm, thigh, and calf muscles, the slightest pressure in these regions gave intense pain, the forcible extension of the knee-joint caused much pain in hamstring muscles; there was also spontaneous pain in these regions, which kept the patient awake at night. She always lay with thighs and knees semi-flexed. No loss of sensation of the skin to touch or prick of a pin, feet always felt cold but were bathed in perspiration. There was absolute loss of muscle reflex in upper and lower limbs, but plantars were normal.

Six weeks after admission motor symptoms about the same; if anything she had more power in the hands. Muscular hyperæsthesia gone, except in the calf muscles; the tingling pains were confined to the feet, but there was marked wasting of forearms and legs, the latter measured two inches less round the calf than on admission. About this time it was noticed that a number of brown maculæ like ordinary freckles, but larger, appeared on the patient's face and legs; at first they were reddish, but soon became brown. She said she never had anything of the sort before. The affected muscles did not react to a strong faradaic current, nor could I, strange to say, get any reaction with a fairly strong constant current.—Feb. 20th (three months after admission): For the last fortnight her muscular power has markedly increased. She can knit, but, owing to the numbness in the end of the fingers, she is unable to work with an ordinary sewing needle. She cannot button any part of her dress unless she can see it. She can stand for a few minutes, leaning with both hands on the back of a chair.

Now the diagnosis of peripheral neuritis in this case from the first could admit of no doubt, but I must honestly admit that the cause was a mystery to me until Jan. 25th, when her husband came under my care in the same hospital, suffering exactly as his wife had done on admission. The symptoms were those of alcoholic peripheral neuritis without any history of alcoholism. They were too acute for lead poisoning, and there was no Burton's blue line. The sensory symptoms were more marked than is seen in diphtheritic paralysis. She was in no way connected with indiarubber works, to suggest bisulphide of carbon as a toxic cause. She knew of no exposure to arsenic or copper poisoning. The case was too acute for rheumatic neuritis.

CASE 2.—William G——, aged twenty-three (husband of previous case), a naturalist's assistant, very healthy until two years ago when he had a bite on the forefinger of the right hand from a viper. The hand was much swollen, but he was able to resume his work in three weeks. His work consists chiefly in rubbing a mixture consisting of four parts powdered arsenic to three parts of plaster of Paris into skins of birds and animals (2 lb. of this mixture would be about sufficient for a bird the size of a goose). He takes some of his work home to a room set apart for that purpose. This room his wife has been in the habit of cleaning out twice a week. He says the powder deposits on his eyebrows, eyelashes, and moustache. He has carried on this work for the last seven years. About one month before admission to the hospital he began to suffer from severe frontal and occipital headache, with vomiting of green fluid, followed by diarrhœa and anorexia. Says his eyes are not sore, but his conjunctivæ are much injected. Five days after these symptoms he noticed tingling in the soles of both feet, and soon after in his hands. He endeavoured to work for three weeks, but then had to give up owing to the weakness of his legs, and the pain in his calves. State on admission (Jan. 25th, 1890): He can flex and extend the wrists feebly. Right grasp 12, left 20. On endeavouring to stand the knees collapse owing to weakness of quadriceps. When seated on a chair, with feet on the ground, he cannot raise his toes off the ground, but lying in bed he can slowly flex the knees and ankles. No weakness of trunk muscles or those supplied by the cranial nerves; full control over sphincters. Calves and hamstrings painful; he cannot bear any pressure on them. Lies in bed with knees semi-flexed. Sensation in patches is impaired; conduction is slow. He cannot distinguish two points applied to the skin of legs four inches apart. His feet are always cold, but moist. Patellar reflex slight in both legs; plantars normal; leg muscles flabby, but not markedly wasted. I could not obtain any voltaic irritability of the leg muscles; the right tibialis anticus responded to a strong faradaic current, which did not affect the left. March 1st: No power of flexion or extension at ankles. No true knee-jerk, but, owing to tenderness of ligamentum patellæ, he flinches voluntarily when you strike. Plantar reflexes absent. Sensation much impaired in both legs; in several regions he does not feel a pin-point. Yesterday had much pain in right knee; there is some effusion into the joint. Temperature normal. Muscles still very tender. Patient drew attention to a couple of brown patches on his thigh. As soon as I heard the history I had twenty-four hours urine of this patient saved; the city analyst evaporated it down to a small quantity when arsenic could be distinctly detected. On March 1st I put this patient on two grains of oxide of silver three times a day, in the hope of forming the insoluble arseniate of silver. He rapidly improved from that date, and within three weeks he could walk up and down the ward without assistance. He was discharged on April 5th; the first case on March 22nd. They both walked to the hospital from their home, a distance of one mile, to see me on April 21st. Mrs. A. G—— has slight ataxic symptoms; cannot stand with feet together, and eyes closed; staggers a little when turning round; knee-jerks still absent. All the brown freckles have disappeared. W. G—— feels very tired after the walk; front part of foot comes down with a jerk; knee reflexes normal; sensation in feet to skin stimulation delayed, but present. The close analogy of these cases to alcoholic and other toxic paralysis would leave little doubt that the pathology is the same—namely, an inflammatory state of the sheath, and probably the parenchyma of the peripheral nerves. The moral to be drawn from these cases of peripheral neuritis of doubtful origin is to carefully examine the urine at once for the poisons that are known to produce this state. If I had done this when my first case came under my care, the probability is I should early have arrived at the cause.

Norwich.

CASE OF ENTERIC FEVER, WITH FOUR DISTINCT RELAPSES.[1]

BY JOHN H. CARSLAW, M.A., M.B.,
SENIOR ASSISTANT PHYSICIAN, BELVIDERE FEVER HOSPITAL, GLASGOW.

MULTIPLE relapses in enteric fever are comparatively rare. In Murchison's treatise and in Ziemssen's Encyclopædia even double relapses or triple attacks of illness are referred to as being seldom seen, and those must be very exceptional cases[2] in which the phenomena of the disease are repeated for the fifth time, as occurred in the one reported below:—

H. C——, aged twenty-three (nurse in enteric ward), was admitted as a patient on Aug. 10th, 1889. For the previous fortnight she had been feeling out of sorts, and had been off duty. Her chief symptom had been headache, but there had been nothing definite about her ailment, and pyrexia was very slight and irregular. (Temperature taken twice daily.) On admission to the ward (Aug. 10th) she was flushed; the tongue was coated all over with a light white fur; the abdomen was slightly distended, but not painful; a few râles were detected on auscultation. Her temperature was 101·8°, and it continued to be elevated, as is shown on the chart. The headache and distension were soon recovered from, but between the 15th and 18th of August the stomach became irritable and there was occasional vomiting; and on the 21st there began a failure of the pulse and a development of serious nervous symptoms. These latter included great restlessness, twitchings of the hands during sleep, retention of urine, and subsequently incontinence of urine and fæces, and were besides associated with a highly albuminous condition of the urine. On Aug. 24th (twenty-eighth day of illness) there was hæmorrhage from the bowel in notable quantity, a further dark motion being passed on the 26th and another on the 27th. Recovery from the nervous symptoms came gradually with the fall of temperature (see chart), and there was a diminution also in the quantity of albumen in the urine. On Aug. 31st, the temperature being 98° in the morning and 99° in the evening, it was noted that she slept well, seemed very comfortable, and had had a very quiet day.

On Sept. 1st the temperature remained below 99° both morning and evening, but upon the evening of Sept. 2nd (although the diet had been kept strictly fluid) there was a rise to 101·4°, and she had a wakeful and rather restless night. The pyrexia was maintained upon the following day, the only new fact ascertained being the presence of some constipation; this was relieved, but the temperature on Sept. 4th reached 102·8°, and on the 5th, 103·2°. Vomiting returned on Sept. 4th, and during the following days was very troublesome and at times "bilious," the stomach being so irritable that even champagne and whey were retained with difficulty. With this persistent vomiting were associated flatulence, abdominal fulness, uneasiness, and pain (but not tenderness); and, though on Sept. 7th the vomiting was greatly relieved, and the tongue continued moist and with very slight fur, the temperature remained high, and there set in a redevelopment of nervous symptoms, the breathing on that evening acquiring a certain degree of Cheyne-Stokes character. This last mentioned feature did not continue for more than a few hours, but returned on Sept. 10th (again only for a short time). During the night of Sept. 8th to 9th the patient was very wakeful and talkative; and on Sept. 11th, muttering delirium, and on the 13th nervous tremors, floccitatio, carphologia, and anxiety of expression were noted. The urine continued albuminous. Sickness and flatulence and abdominal uneasiness returned from time to time, with some diarrhœa, and a pulse so feeble that one was often unable to count it. On Sept. 17th, however, it was noted: "Temperature tends lower; nervous symptoms greatly abated; stomach not so irritable; diarrhœa moderate; distension gone; tongue dry, and with transverse fissures; breathing regular; pulse rather improved; urine in good quantity." It was only on Sept. 25th that the temperature reached normal in the evening, and delirium continued in a modified form for a day or two after that date. During the last few days of this term of pyrexia cough had been troublesome. Diet was very cautiously increased, milk and beef-tea being continued up till Sept. 30th, when thin cornflour was given. On Oct. 3rd strained chicken soup was allowed; bread crumbs added to this on Oct. 7th, dry bread on the 9th, and a little chicken on the 11th. Convalescence seemed again fairly established, and the patient had gained considerably in strength. She had, further, regained complete consciousness, but could remember nothing of what had happened after the first few days of residence in the ward.

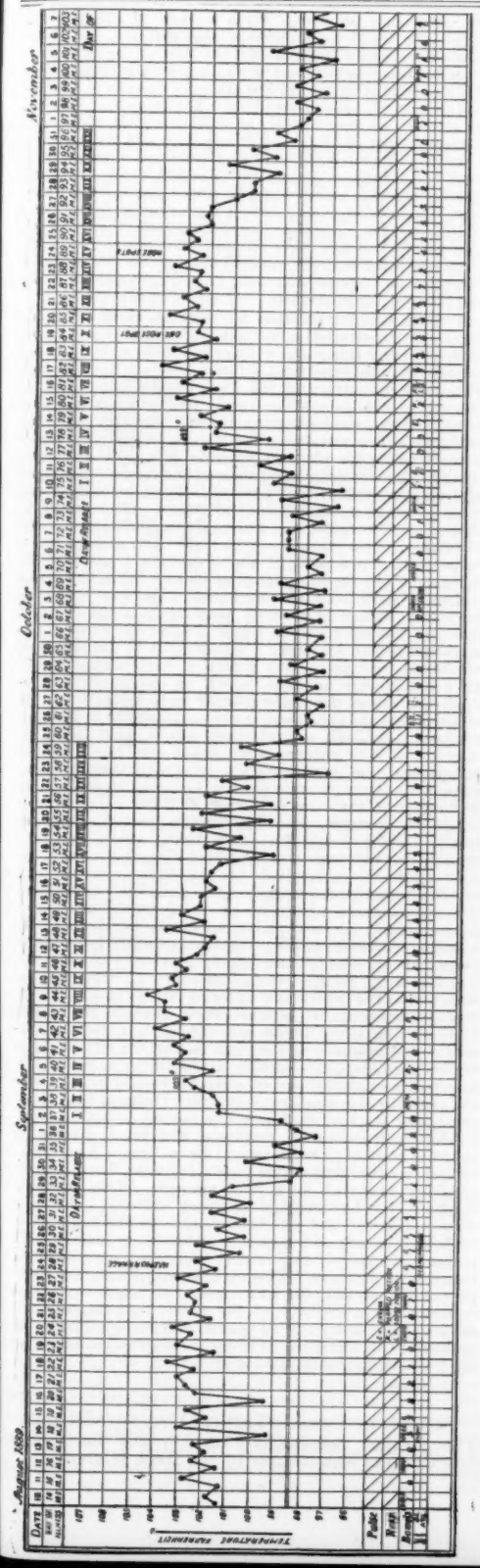
On Oct. 10th, however, there was a return of malaise and headache, with slight abdominal pain, and the evening temperature was 99·4°. On the 11th the morning temperature was 98·6° and in the evening 100°, and solid food was again accordingly forbidden. The rise continued none the less, with marked evening exacerbations. Restlessness, with slight diarrhœa and sickness, soon troubled her, and the tongue on Oct. 17th had become a little furred, and with a slight aphthous sore upon its side. The diarrhœa continued and the motions became green—"chopped vegetable" appearance—but there was no distension, merely some abdominal discomfort. Rose spots were noted on Oct. 19th and 24th, but were scanty; none had been seen in either of the previous attacks. On Oct. 21st (twelfth day of relapse) bronchitis and considerable pain in the left hypochondrium were added to the complications already present, and grave apprehensions were once more entertained for the patient's life, on Oct. 23rd the respirations having again a little of the Cheyne-Stokes character, and slight delirium with involuntary evacuations again manifesting itself on Oct. 25th. There was gradual improvement in symptoms, and the temperature once more became normal upon Nov. 1st (twenty-third day of relapse). With the exception of Nov. 5th, when it was 99·6° in the evening, and of Nov. 9th, when it was 99·2° in the evening, it remained absolutely normal until the evening of Nov. 11th. The cough had in the meantime quite gone and the urine become free from albumen. The bowels had been moved every second evening by glycerine enemata. On Nov. 9th, 10th, and 11th she had a little thin cornflour, in addition to milk, beef-tea, and egg-flip, the last mentioned having been begun on Nov. 1st.

As the chart indicates, the rise of temperature which commenced on Nov. 11th was rapid. On the evening of Nov. 12th, 103·6° was reached; on the evening of the 13th, 103·8°; on the evening of the 14th, 104°; and on the 15th, 104·6°, being the maximum of this the third relapse, and indeed of the whole case. The accompanying symptoms again included headache, abdominal discomfort and distension, irritable stomach, diarrhœa and albuminuria, with renewal of the furring of the tongue. Pains and aching in the limbs were complained of on Nov. 15th. On Nov. 21st deafness was noted as returning, this symptom having been present in previous attacks. There was also some wakefulness, but no more serious nervous complication. No rose spots were seen. Temperature was again below 100° (both records) on Nov. 26th and 27th, but rose to 100·4° on the evening of Nov. 28th, when there began a phlebitic swelling of the left leg—phlegmasia dolens of enteric fever. By the evening of Dec. 2nd, however, the evening temperature was once more down to the normal, and the records continued normal or subnormal until the 13th. On Dec. 5th there was œdema of the right foot, but no pain or tenderness in the calf or groin, and no induration. Diet was increased gradually, thin cornflour being allowed again on Dec. 7th, strained chicken-soup on the 9th, and crumbs in soup on the 13th.

It was on the 13th that the fifth and last attack of illness began. It was slight, and during it the evening temperatures alone were elevated, these being all above normal (maximum 101·4°) between Dec. 13th and 22nd. During this period there were present wakefulness, bad taste in the mouth, and constipation; the urine had a haze on testing for albumen only once (Dec. 21st). The bread-crumbs were withdrawn from the diet between Dec. 15th and 25th, but during this last pyrexial attack strained chicken-soup and cornflour, besides milk, beef-tea, and egg-flip, were continued. On Dec. 29th custard and arrowroot were added; on Jan. 4th tea, bread-and-butter; 8th, a small piece of chicken; 22nd, some fish. It was only on Feb. 5th that the patient was allowed

[1] For the notes in regard to the initial attack I am indebted to Dr. Allan, Physician Superintendent, Belvidere, and to Dr. D. J. Mackintosh, formerly of Belvidere, now Medical Superintendent, Victoria Infirmary, Glasgow.

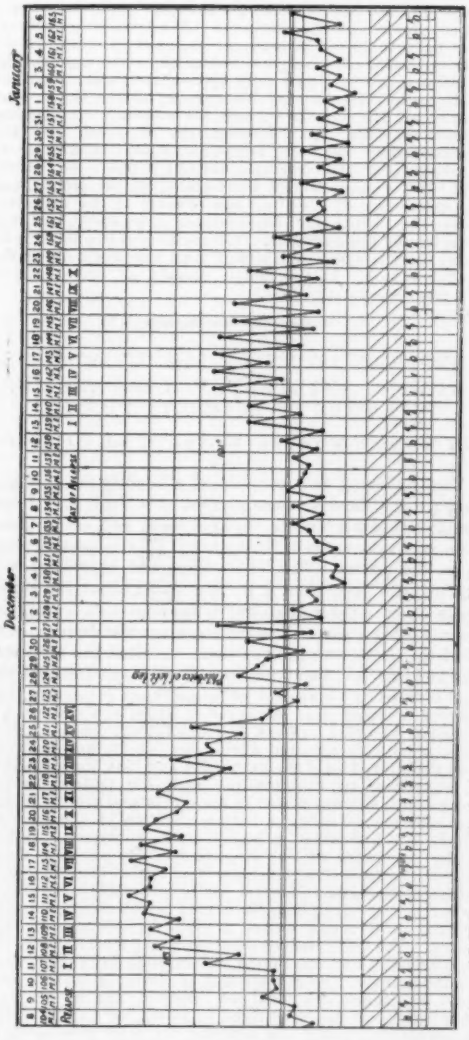
[2] Irvine on Relapses of Typhoid Fever, especially with reference to the Temperature (1880), p. 115; Broadbent's article on Typhoid Fever in Quain's Dictionary of Medicine (1883), vol. ii., p. 1683; Hilton Fagge's Principles and Practice of Medicine, edited by Pye Smith (1888).



up, the long delay being partly due to the great emaciation which had taken place, but in part also to the local conditions in the left leg from which she had not entirely recovered, even on dismissal in the beginning of April. The temperature was never above 99·4° after Dec. 22nd. On March 6th she was able, for the first time, to be out of doors; her weight was then 8 stone 13 lb. By the beginning of April it had increased to 9 stone 7 lb., and her general condition was excellent.

The study of the temperature chart gives the following results in regard to the points noted by Irvine[3] as of importance in the thermometry of relapses in enteric fever:—

Interval between attacks.—In the first instance this was



only of two days' duration; the other intervals lasted fifteen, ten, and sixteen days respectively. Except as influenced by the occurrence of the phlebitis in November, the temperatures during the intervals were all practically normal or subnormal, the morning record being only exceptionally over 98·4° or the evening over 99°. In the last interval, early in December, after the fever due to the phlebitis had subsided, there was a marked depression of temperature below the normal line, but this was not accompanied by any abnormal lowering of the pulse rate. There was a similar depression of temperature for ten days following the final relapse.

Length of relapses.—The initial attack lasted 34 days;

[3] Loc. cit.

the first relapse lasted 23 days; the second relapse lasted 22 days; the third relapse lasted 16 days; the fourth relapse lasted 10 days. The duration thus decreased in each successive attack, and in connexion with this it may be recalled that the severity of symptoms was much diminished in the last two.

Course of temperature.—This varied in the different attacks. The onset of the initial attack was very insidious and indefinite, and it was only in the third week that there was persistent pyrexia. During this week the evening temperatures all exceeded 102°, and two reached 103°, while during the fourth week the majority were 103° or over it. Lysis took place during the fifth week. In the first relapse there was a sudden rise from normal to 101·4°, but it was only on the sixth day of relapse that 104° was reached, and on the eighth that the maximum (104·4°) was noted. From that point there was a gradual decline of pyrexia. In the second relapse 103° was passed upon the sixth day, but the maximum (104°) reached only upon the eighth. From the sixth to the sixteenth day the evening temperatures were almost all 103° or over it, and the morning temperatures almost all over 102°. Between the sixteenth and the twenty-second day the temperature fell by degrees to normal. In the third relapse the onset was more sudden, and 103·6° was reached on the evening of the second, and the maximum of 104·6° on the evening of the fifth day. Upon the twelfth day defervescence commenced, and was complete by the sixteenth. The maxima of temperature in these three relapses were higher than the maximum of the initial attack. In the fourth relapse, as stated above, the fever was intermittent.

Glasgow.

COMPLETE ATONY OF THE UTERUS FOLLOWING ANTE-PARTUM HÆMORRHAGE IN A CASE OF PLACENTA PRÆVIA.

BY ERNEST POWELL WATKINS, L.R.C.P. LOND.

THE following case occurred in a country practice, and may possibly interest some readers. On Sept. 14th I was summoned to see Mrs. L——, aged thirty-two, a multipara, who was said to be suffering much pain in and bleeding from the uterus. The hæmorrhage had ceased when I arrived, and the patient I found walking about the house, quite unconcernedly attending to her household duties, two hours having elapsed since the messenger was despatched to fetch me. After several questions, I elicited the facts that she had just lost about half a pint of blood, and that she had suffered three attacks of hæmorrhage previously, two having occurred near Morecambe, where she consulted a chemist, who told her not to feel alarmed, that menstruation sometimes occurred during pregnancy, and that she had nought to fear if she kept quiet and took the medicine! I suggested an examination, and, the patient having acquiesced, she was placed in the left lateral decubitus, the examination revealing a turgid condition of the os, with slight but undoubted pulsation in its substance. It was quite impossible at this stage to feel the placental mass, although two or three attempts were made. The differential diagnosis between accidental and unavoidable hæmorrhage was rendered very plain, for a pain which occurred during digital examination caused a slight hæmorrhage to take place. The first bleeding occurred on the second day of the sixth month, and this fourth hæmorrhage in the first week of the seventh. As the amount of discharge on this occasion was much less than the previous, and as the time was considered the borderland of safety for a viable child, a temporising policy was adopted, the chief care being to arrest the discharge and prevent expulsion, and to effect this the patient was enjoined to keep quiet in the recumbent posture. Everything went well until the beginning of the eighth month, when a profuse hæmorrhage took place. Examination per vaginam revealed at this stage a long and soft cervix, the vaginal fornix having a boggy feel, and the soft fibrous placental mass could be distinctly felt through the os, the latter being partially covered. It was still more apparent what had to be dealt with now, and after consultation with a brother practitioner we decided that it would be wise, in view of this hæmorrhage, to terminate the pregnancy at once. With a view of effecting this object the bladder and rectum were emptied, and Barnes' dilators were used, after which the side of the os free from placenta was selected for the purpose of breaking through the membranes, in the hope of effecting descent of the head, and so controlling the bleeding. The hæmorrhage ceased for a time, but only to recur at short intervals, and as there were no signs of the head descending, and as the forceps were inapplicable, the head being quite out of reach, it was decided to further detach the placenta, with a view of introducing the hand—first, to plug; secondly, to ascertain the position of the child; then thirdly, to deliver by podalic version. Another slight hæmorrhage took place at this point, but this soon stopped, and it was found that there was a misdirected axis. This, together with the fact that the membranes had now been ruptured some time, complicated the procedure.

A dorso-anterior position having been made out the left hand was introduced in the intervals between the pains, a little difficulty being met with at the brim, which was overcome by pushing the head on one side into the iliac fossa. The popliteal surface of the knee on the same side, and nearest to the presenting hand, was seized and brought down, the foot soon plugging the os. Delivery was terminated in a few moments, the uterus contracting forcibly and extruding the placenta speedily, and so all hæmorrhage ceased. The patient being somewhat faint, a drachm each of aromatic spirit of ammonia and liquid extract of ergot were given in a wineglassful of water. The uterus was cleared of all coagula, and external manipulation employed to further excite uterine contraction. The patient seemed to be getting on well until about thirty-five minutes after delivery, when she complained of feeling faint, and became suddenly blanched. On examination it was found that blood was oozing in a small quantity from the vulva, the bleeding having come on quite insidiously, when all had apparently gone on well. We decided to introduce the hand into the uterus with a view of ascertaining whether all coagula were expelled, when, to our surprise, it was discovered from the ready manner in which entrance was effected that the organ was metamorphosed from its former compact, hard, and rotund shape into a most flabby condition. It was evident that there was most complete atony, and the cause of this atonicity was no doubt exhaustion through ante-partum hæmorrhage. The hand was kept in utero with a view of reflexly inducing the organ to contract, and hypogastric massage was also freely employed at the same time. Five grains of ergotin in solution was injected hypodermically, and cold cloths were applied to the vulva, but in spite of this combined internal and external manipulation the uterus made only two or three feeble attempts at contraction. As the pallid appearance, faintness, and bleeding increased, another ergotin and ether injection was given hypodermically, and brandy was freely administered. The bleeding, though lessened, continued. The child was then put to the breast and water at 112° F. injected. This was also unsuccessful; and all efforts to check the bleeding by producing reflex action proving fruitless, the aorta was gently compressed near the umbilicus on the left side of the vertebral column, in order to avoid the vena cava. This arrested the hæmorrhage temporarily, but on withdrawal of the pressure the bleeding recurred. Collapse now became great, and the first cardiac sound almost inaudible, and a subdermic injection of ammonia was tried, the patient showing marked signs of revival for a time. As all efforts to induce reflex contraction proved fruitless, thrombosis was carefully produced as a final measure. This was most effectual, the hæmorrhage stopping entirely. Sinapisms were applied to the præcordium and to the nape of the neck, and brandy and eggs administered per rectum. The patient, in spite of this stimulation, died of syncope two hours after delivery. The case is interesting in that it proves the necessity for termination of pregnancy without regard to the viability of the child. Again, after the failure of ergot and hypogastric massage, thrombosis appears to be the most effectual of all methods of arresting hæmorrhage in the atonic uterus.

Nottingham.

SCHOOL OF PHYSIC, TRINITY COLLEGE, DUBLIN.—The Medical Scholarship (Anatomy and Institutes of Medicine) has been obtained by Mr. Hugh Hunter.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

FIBROMA MOLLUSCUM.

By ALEX. THEODORE BRAND, C.M., M.D.

WELL-MARKED examples of this disease are rare, and I have deemed the following case sufficiently interesting for publication. I have never seen a better marked case, the nearest approach being that recorded and illustrated by Professor Theodor Billroth of Vienna, in his "Clinical Surgery" (Sydenham Society, 1881), under the designation of "Multiple Soft Fibromata." Some years ago W. D—— came under my care as a parish patient for respiratory troubles; and he remained under observation until his death, in October last, of chronic bronchitis, at the age of sixty-seven. In Billroth's case the multiple fibromata appeared at the age of twenty-three, after removal of a tumour of four or five ounces in weight from the chin; but in W. D——'s case the disease seems to have been congenital, if his statement that he was born with the tumours can be relied upon. I had the greatest difficulty in gaining his consent to his being photographed naked, and after his consent was obtained I found it a difficult task to photograph him, as the only support he had was derived from his left foot and his crutch. I examined several of the tumours, and found them to present macroscopically and microscopically all the usual features described in pathological text-books. The illustration needs no description as it speaks eloquently for itself; but I would point out that the man was quite a pathological curiosity, inasmuch as he was the possessor, in addition to his fibromata, of a huge irreducible, right oblique, inguinal hernia, and an ununited fracture (sustained at the age of nine) of both bones of the right foreleg, just above the malleoli.

Driffield, E. Yorks.

THREE CASES OF HARD CHANCRE ON THE FACE.

By P. A. LLOYD, F.R.C.S. ENG.

CASE 1. — A patient aged twenty-five consulted me in January, 1889, for a sore at the left angle of her mouth, which she had noticed for six weeks. She was only recently married, and was most anxious to have the sore excised, as her doctor had diagnosed it as epithelioma and had strongly urged this operation at once. The sore had a markedly indurated base, was just moist, but there was no distinct discharge from it. The glands under the left angle of the lower jaw were enlarged, and on examination I found a well-marked papular rash on the chest and abdomen. Antisyphilitic treatment was adopted, and in six weeks the sore had healed, leaving a slightly marked cicatrix, and the rash had disappeared. In this case the sore was supposed to have been communicated by kissing.

CASE 2.—A soldier came to me in December, 1888, with a sore on the left side of the lower lip, which he had noticed for a fortnight, and which he attributed to smoking another man's pipe. Antisyphilitic treatment was at once used, and no rash ever came out during the two months he remained under observation; mucous tubercles occurred in the mouth, but quickly got well. The sore was quite typically hard, and the glands under the jaw were much enlarged.

CASE 3.—A woman aged forty-four came to me in August, 1889, complaining of a sore on her left brow, just at the edge of the scalp, which she had noticed one month. There was very little if any induration of the sore, and the diagnosis would not have been easy if it had not been for the rash on the body and the enlarged glands in the neck. The patient could not account for the sore in any way; she had been married for seventeen years and had three children, all perfectly free from syphilis. She was treated with mercury in the same way as the other patients, and the last time I saw her was doing well.

Remarks.—Though primary sores on the face are not very rare, they are very apt not to be recognised by those who do not see many cases of syphilis. Any patient of young or middle age who has a sore which is hard at the base and has caused enlargement of the glands in the neck in a few weeks should certainly be suspected of having syphilis, and secondary symptoms should be carefully looked for. Epithelioma of the lip is rare in women, and I think practically unknown in women under forty years of age.

Carlisle.

A CASE OF SNAKE-BITE.

By JOHN MCINTYRE, M.D.

THE following notes of a case of snake-bite, which I saw on May 15th of the present year, may be of interest to readers of THE LANCET. I was summoned by telegraph to attend an Indian who had been bitten on the finger by a puff-adder when at his work in a cane field. I saw him at 4.30 P.M., about two hours after he had been bitten. He could not stand, but was held upright by two men. Each had an arm round his chest and the patient's arms were resting on their shoulders. His legs were dangling on the ground. His head and chin were lying on his chest, the saliva issuing from his mouth. His eyes were closed, the pupils dilated and sluggish, and he had not spoken for some time. The men had been endeavouring to drag the patient about, with the idea of preventing stoppage of the circulation &c. Two ligatures of "spun yarn," each three inches broad, had been *tightly* wound round the arm; one at the wrist, the other near the upper end of the humerus. The wound on the finger had been freely incised, and at first only a little tarry-looking blood flowed; but after a time blood of a natural colour came. He had been given eau de Luce in twenty-drop doses, with Natal rum 54° over proof and water to two ounces, every twenty minutes; but much of it was lost, as latterly he could not swallow. When I saw him I cut away the ligatures, and, as I could feel no radial pulse on the right side, and the heart's action was very feeble, I as well as some of those present who had seen many cases of snake-bite thought the man dying. I had him laid on his back and the head raised. The jaws were clenched in a tetanic spasm. I inserted an iron chisel between the teeth. A mixture of ammonia and rum was then gradually poured into the mouth. I kept pouring this into the mouth at short intervals, till he began to breathe. Then the eyes opened and the jaws relaxed, and he raised his head and after a time vomited very freely. When this stopped I repeated the rum &c. till he had had a quart. This would be about an hour from the time I first saw him. He could stand (with help), but gazed vacantly about, and, as he was wet and cold from the vomiting &c., I had him washed and some temporary clothing put on his body. He was sent to the Estate Hospital, and I directed that he should continue to take the rum and eau de Luce and some strong tea every three-quarters of an hour during the night, and not be allowed to go to sleep. Next morning at 8 o'clock I was agreeably surprised to find the man leaning his arms on the two men and walking about, and, as he said, *quite well*. He had vomited twice during the night, and the bladder and bowels had acted. The hand was slightly swollen, but not the arm, and he said he had no pain anywhere. I ordered him a tonic, which he had for a few days. He is now convalescent, and will return to his work shortly. I was shown the dead body of the puff-adder; it was about three feet in length.

Natal, South Africa.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

CHARING-CROSS HOSPITAL.

DOUBLE EMPYEMA; CONSECUTIVE REMOVAL OF RIB FROM BOTH SIDES OF THORAX; RECOVERY; REMARKS.

(Under the care of Mr. JOHN H. MORGAN.)

WE publish below the notes of a very interesting and unusual case of double empyema, in which the more radical operation of resection of rib was performed on both sides. There are few examples of this condition on record in which recovery followed any method of treatment, and it would be advantageous if members of the profession who have had experience of similar cases would make them known. We have brought forward a case in the Mirror,[1] which was successfully treated by Mr. Okell. A child aged five years and nine months was in the Leicester Infirmary, under the care of Dr. Blunt. The symptoms had existed for seven weeks before admission, and the treatment employed was resection of rib on the right side, and on the left incision and drainage. Writing on the subject of double empyema, Mr. Godlee[2] says: "Empyema on both sides of the body at the same time is almost necessarily fatal, unless one or the other be localised, except in those cases in which the purulent contents are absorbed. If a general empyema have been opened, and another form on the opposite side, it is obvious that the only surgical treatment for the second collection is by aspiration." Dr. Cheadle[3] had a patient, a pregnant woman of thirty-one, under his care in St. Mary's Hospital, in whom the repeated removal of purulent fluid from both sides was followed by recovery. She was under care for sixty-two days. The second case is an example of the escape of a purulent collection from the thorax, and its pointing in an unusual position. Empyemata may point in almost any part, but the more erratic courses are rare. Mr. Marshall considers the usual position for the pointing of an empyema to be outside and below the junction of the fifth rib with its cartilage. By others it is said that the more common situation is a point higher up in the second or third space. The following account is taken from the notes by the surgical registrar, Mr. Da Costa.

J. W. F——, aged six, a well-nourished boy, was admitted into Charing-Cross Hospital on March 26th, 1889, under the care of Dr. Bruce, with distressing cough and dyspnœa. Two years ago he was in St. Bartholomew's Hospital for whooping-cough accompanied with bleeding from the nose and mouth, and since then he has been delicate. His present illness began eight days before admission, when he was attacked with sore throat, and this was followed by pneumonia, for which he was attended by a doctor.

On admission the pulse was 152; respiration 68. Fluid was found to be present upon both sides of the thorax, and was more extensive on the left. On this side dulness extended everywhere below the second intercostal space. The apex of the heart was pushed downwards and inwards, and was situated below the margin and a little to the left of the xiphoid cartilage. On the right side bubbling râles were audible from the apex to the level of the sixth rib. Posteriorly dulness extended from the upper third of the vertebral border of the scapula to the twelfth rib; over this area there was marked superficial bronchial breathing and bronchophony. On the right side dulness spread downwards from the level of the angle of the scapula. Above this crepitation was heard, and in the dull area the breath sounds were very distinct. The child had a hacking cough, and lay by preference upon the left side. On the following day a trocar was introduced at the seventh left interspace a little in front of the posterior line of the axilla, and eight ounces of nearly clear fluid were withdrawn. The next day there was less dyspnœa, and the child was not so distressed. He lay on the right side and respiration was accompanied by a short dry grunt. The alæ nasi were working constantly, but respiration dropped to 52 and pulse 104. The left half of the chest moved and expanded much more than the right, but the respiration was mainly diaphragmatic. On palpation marked fremitus was observed over the upper part of the right side and to a less extent on the left. The apex beat was just below and internal to the nipple. The dulness posteriorly was much less extensive. On March 28th the respiration was 68 and pulse 104. Subcutaneous emphysema was noticed around the site of puncture extending to some distance down over the abdomen. For the next seven days the condition did not alter greatly, but suppuration occurred at the site of the puncture, and on April 5th a hypodermic needle was introduced on the left side, but no fluid was withdrawn. On the 7th it was introduced on the right side, and some thick purulent fluid was withdrawn, and on the 9th 22oz. of pus were removed by means of the aspirator. On the 11th 4oz. of pus were removed by the aspirator from the left side. Pulse 120; respiration 62. The boy was rapidly losing flesh, and his general appearance indicated the results of impeded respiration and of embarrassed heart's action. Mr. Morgan was asked to see him in consultation, and advised that free exit should be given to the matter on one side of the chest, by means of an incision, and, if necessary, the removal of a portion of one or more of he tribs. Accordingly on April 18th the A.C.E. mixture was administered, and was fairly well taken, in spite of the affection of both sides of the thorax. The pleura on the left side was opened, and about one inch and a half of a rib was excised. A very large quantity of healthy pus was evacuated, and a drainage-tube inserted and antiseptic dressings applied. In consequence of the patient's feeble state it was thought advisable to defer operation upon the opposite side. Great benefit ensued at once, the lung gradually expanding and occupying a larger portion of the thoracic cavity. The respiration diminished in frequency, but the condition of the right thorax prevented him from making great improvement in his general health. On April 25th twelve ounces of pus were withdrawn by aspiration from the right chest.

On May 1st, twelve days after the former operation, chloroform was administered, which was well taken, and a similar operation was performed on the right side. As soon as the pleura was opened a very large quantity of pus issued, welling up from the opening with each respiratory wave. So large a quantity came away that it was not thought advisable to turn the child on his side lest the evacuation should be too rapid, and a drainage-tube was inserted and antiseptic dressings applied. These, however, required changing the same evening, when they were found to be saturated with discharge. From this time the discharge gradually diminished, and the boy's general health greatly improved. The drawn and dusky look of the face gave way to a healthy colour, and the clubbing of the fingers, which previous to the operations had been very marked, began gradually to diminish. The respiration became less rapid and the temperature lower, till the former dropped to 50 and the latter became subnormal. In seventeen days the patient gained three pounds in weight, and on May 18th the left lung filled the whole of that side of the thorax, the heart had regained almost its normal position, and all discharge from that side had ceased. The drainage-tube required to be maintained on the right side for a little longer, but by the end of the month that was removed and the sinus quickly closed, when the lung appeared to have regained its normal position.

The patient was discharged with both openings soundly healed, and was seen a month later in perfect health. He was inspected in June, 1890, exactly a year after his discharge, and it was then found that the periosteum in the region on both sides from which portions of rib had been removed had thrown out bone, which formed a firm covering to that part of the thorax. Respiration over the whole thorax, including the situation of the empyemata, appeared perfectly normal and the heart's apex was in its natural position.

Remarks by Mr. MORGAN.—There would seem to be very few instances on record in which the thorax was opened on both sides at the same time. In the case related there seemed nothing to contraindicate the operation being done

[1] THE LANCET, vol. ii. 1888, p. 114.
[2] Heath's Dictionary of Surgery, vol. i., p. 459.
[3] Med. Press and Circular, 1878, N. S. xxvi., p. 472.

on both sides simultaneously except the very feeble and exhausted condition of the boy, coupled with the impeded action of the heart, consequent upon its displacement by the fluid in the left pleura. The relief which is given to the pressure upon the lung by the release of the contents of a large empyema is often followed by reaction, as the component parts of the area in which pressure has been exercised expand to resume their normal position and function. Had the operations been done simultaneously the reaction might have been too great for the exhausted condition of the patient to withstand. But for this it would have been better to relieve the thorax of the large amount of fluid which it contained as early as possible, and as soon as the reaction consequent on the operation on the left side had subsided an opening was made by which the collection in the right chest could find exit, and as satisfactory evidence that the delay was not too prolonged the lung on both sides has expanded to resume its normal position and functions. It is too often overlooked that an empyema is a collection of fluid limited in area and bounded by firm margins, and in which the contained fluid exercises an extreme amount of constant pressure upon the surface of lung with which it is in contact. The conditions, therefore, when an exit is given to the contents must be in the direction of relieving pressure upon the lung, and there is no analogy between opening such a cavity as to permitting air to enter a healthy pleura, since the pressure of air which is admitted to the cavity of an empyema is limited by the margins of the abscess cavity and has less weight and power of pressure than the fluid which it replaces.

LARGE EMPYEMA, PASSING DOWN THROUGH THE DIAPHRAGM AND AMONG THE MUSCLES OF THE ABDOMEN.

H. C——, a delicate boy aged six, was admitted into Charing-cross Hospital after having been ill for three weeks. It was found that the whole of the right side of the chest was absolutely dull on percussion, the left being hyper-resonant. The intercostal spaces on the right side were bulged, and there was no movement of that side of the thorax. Below the line of the ribs and extending down nearly to the ilium was a large fluctuating swelling, having three prominent elevations, one of which was red on the surface. Fluctuation could be made between any of these prominences by pressure upon one of them, but whether they communicated with the fluid in the thorax there was no means of ascertaining. An incision through the skin over the outer and posterior prominence showed that the fluid lay beneath the external and internal oblique muscles, and on incising them a large quantity of purulent fluid, estimated at about sixty ounces, was evacuated. A finger was inserted into the cavity, and was passed upwards into the right thorax, through the track of the abscess. The upper surface of the diaphragm and the inner surface of the lower ribs and intercostals could be felt, so that the fluid in the pleura must have passed between the attachment of the diaphragm to the lower ribs and separated the oblique muscles from the transversalis, and in the cellular tissue between these muscles lay the cavity of the abscess, which formed the prominences on the surface of the abdomen. A large drainage-tube was passed through the track described into the cavity of the pleura. The temperature before operation was 101·8°; respiration 50; pulse 155; the apex of the heart was displaced upwards and to the left. In the course of five days the position of the heart appeared to be normal. The temperature fell to between 99° and 100°, but the respiration continued to be rapid; but the right chest was resonant as far down as the level of the nipple. The wound was dressed daily, but the discharge gradually diminished. On the fifteenth day after operation the temperature rose to 102·8°, and on the following day, it being still high, Mr. Morgan examined the track of the abscess with the finger, and found that the diaphragm had been pushed upwards and backwards, thereby obstructing the discharge. The opening having been cleared by the finger some warm water, with a very weak solution of carbolic acid, was injected, and the tube again inserted. Next day there was but little discharge, but the temperature was high, and two days later rose to 104°, but the respiration was only 40. Sickness and diarrhœa lasting five days may have accounted for the fever, as Dr. Green, who examined the chest, could find nothing in the condition of the lungs to explain it. As the discharge was very slight the drainage-tube was gradually shortened, and as the state of the bowels improved the temperature gradually sank, until at the end of sixteen days from the second examination it was little above 99°. Meanwhile the lung had expanded, until on April 1st respiration could be heard over the normal areas, and on the following day the tube was left out. The wound had completely healed in another twelve days, and the boy had gained two pounds and a half in weight. Before his discharge it was reported that the breath sounds, although weaker than on the left side, could be distinctly heard almost as low as in the opposite side. The chest wall has not very good expansion, but movements are perfectly visible. Resonance is impaired, especially at the base, but nowhere quite dull. The boy was sent to the country, and has since attended to show himself, and appears to be in perfect health, and has gained considerably in flesh.

WOLVERHAMPTON GENERAL HOSPITAL.

SOME CASES OF TRACHEOTOMY FOR SCALD OF THE LARYNX; REMARKS.

(Under the care of Mr. J. HARLEY GOUGH, late house surgeon, now resident medical officer to the Royal Albert Hospital, Devonport.)

CASES of scald of the mouth, on account of their urgency for treatment, come more especially under the care of the residents in our hospitals, and when the larynx has been directly involved, the treatment must often be prompt and decided, if the life of the child is to be saved. We publish a series of cases in which urgent dyspnœa was present, and in which tracheotomy was performed by Mr. Gough with varying success. We do not know of any statistics or published results of the use of intubation in scald of the larynx. A comparison of tracheotomy with intubation, when employed for urgent dyspnœa due to membranous laryngitis, gives much the same average percentage of recoveries after each.

CASE 1.—James C——, aged three, was admitted into the Wolverhampton General Hospital early in the morning of Nov. 17th, 1886, having sucked the spout of a kettle containing boiling water about six o'clock the evening before. His parents said that soon after the accident his breathing began to get croupy, and during the night became very much worse, and on that account they brought him to the hospital. On admission, the child was much exhausted; respiration was performed with difficulty, the chest walls being drawn in during each attempt at inspiration; the tongue was coated with a thick white fur, and the uvula and fauces were swollen. The patient was at once put to bed, and the cot was surrounded by a tracheotomy tent. Hot moist sponges were applied to the throat, and steam from a bronchitis kettle was conveyed into the tent. The child's condition, instead of improving, became worse, and tracheotomy was performed about an hour after coming into the hospital. The relief from the operation was almost instantaneous, the breathing became quiet and natural, and the pulse soon regained its normal volume and number of beats. Enemata of brandy (half a drachm), beef-tea (four drachms), and milk (four drachms) were given every four hours for the first thirty-six hours, after which the child took plenty of liquid nourishment by the mouth. The tracheotomy tube was removed on the fourth day, and the patient left the hospital cured on Dec. 12th, 1886.

CASE 2.—Charlotte U——, aged three, was admitted into the Wolverhampton Hospital on Nov. 24th, 1886, having drunk some boiling water about four hours before. On admission there was much inspiratory dyspnœa and exhaustion, which rapidly became worse, in spite of treatment—viz., tracheotomy tent, inhalation of steam, hot sponges to the throat,—and tracheotomy was performed about two hours later. When the child was put back to bed after the operation she at once fell into a natural and sound sleep. Nutrient enemata were given as in the preceding case. On the fifth day the tracheotomy tube was removed, but had to be reintroduced thirty-six hours later on account of dyspnœa after a fit of coughing. It was removed again three days later, and had to be replaced in ten hours' time, but a soft indiarubber tube was substituted for the silver one, which was finally removed on the eighteenth day, and the patient left the hospital cured on Dec. 21st, 1886.

CASE 3.—Joseph C——, aged three, was admitted into

the Wolverhampton Hospital on Dec. 20th, 1887, having drunk out of a tea-kettle. Difficulty of breathing soon set in, and when the patient was brought to the hospital he was in a moribund condition, necessitating tracheotomy immediately on admission. The relief from the operation was great, but the child died the next night from congestion of the lungs and convulsions.

CASE 4.—William T——, aged two, was admitted into the Wolverhampton Hospital on Feb. 9th, 1888, having drunk some scalding water from the spout of a kettle about an hour before. On admission, there were some dyspnœa and a croupy cough. Ice packs were applied to the throat, and iced water in teaspoonfuls were given by the mouth every few minutes. The symptoms increased and became alarming in spite of treatment, so tracheotomy was performed about three hours after admission. The same treatment was adopted after the operation as in the preceding cases. For the next two days the patient's condition was most satisfactory, the breathing, pulse, and temperature being normal, the child taking nourishment by the mouth on the second day. On the third day the temperature rose to 100°, and some bronchitis developed, which rapidly became worse towards evening, and from which the patient died on the fourth day.

The following case has been operated on by Mr. Gough in the Royal Albert Hospital, Devonport.

CASE 5.—W. R. D——, aged two, was admitted on Feb. 8th, 1890, the patient having sucked the spout of a kettle full of boiling water. When brought to the hospital there was much dyspnœa and exhaustion. The tongue was white and the uvula and fauces were swollen, congested, and excoriated. The patient was put to bed in an atmosphere of steam, with hot sponges applied to the throat. As the symptoms, which were very bad on admission, became urgent, tracheotomy was performed by Mr. Gough about half an hour after the patient's arrival at the hospital. The child slept well all night after the operation, and next day took liquid nourishment by the mouth. On the fourth day the tracheotomy tube was removed, but was replaced about eight hours later on account of an attack of dyspnœa after coughing. It was finally removed altogether on the fifth day, and the patient left the hospital cured on Feb. 27th, 1890.

Remarks by Mr. J. GOUGH.—During the past four years I have been called upon to perform tracheotomy in five cases of scald of the larynx, of which three recovered and two died. On referring to the hospital records I find that during my period of office as house surgeon to the Wolverhampton and Devonport Hospitals, thirteen casse of scald of the mouth and throat have come under my notice (twelve occurring at Wolverhampton and one at Devonport), out of which the laryngeal symptoms became so urgent that tracheotomy was required in five of them. All the cases occurred in young children, and resulted from attempts to drink boiling water or tea from the spout of a kettle. In two or three of the cases the physical signs and symptoms were almost *nil*, and the children were only taken into the hospital to be watched, otherwise the severity of the symptoms varied from a slight soreness of the mouth and fauces, and a hoarse croupy cough, to impending death from suffocation. The treatment adopted was either—(1) the inhalation of steam in a tracheotomy tent and hot moist sponges to the throat; or (2) iced packs applied to the throat, and iced water or iced milk and water administered in teaspoonfuls by the mouth every few minutes. All the cases were watched carefully, and in those where the symptoms of laryngeal obstruction and general exhaustion became rapidly worse and urgent, tracheotomy was resorted to. As regards the operation itself, chloroform was always administered, sufficient to annul pain during the skin incision. When the trachea was clearly exposed to view, it was fixed with a sharp hook and the upper rings divided, and a Fuller's bivalve and cannula inserted and tied in. For the first twenty-four or thirty-six hours after the operation nutrient enemata of brandy, beef-tea, and milk were given, after which liquid nourishment could generally be taken well by the mouth.

THE SANITARY INSTITUTE.—In order to make the Parkes Museum, which is supported by the Institute, available to all classes for the purpose of obtaining information on matters relating to hygiene and sanitary appliances, the council have resolved to throw this museum open free at all times, except when meetings or lectures are being held.

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Concussion of the Eyeball, giving rise to Acute Local Symptoms of Congenital Syphilis.—Cephalic Tetanus following a Penetrating Wound of the Orbit.—Pyæmic Panophthalmitis.—Note on the Operative Treatment of Scleral Wounds.—Acute Cellulitis of the Orbit with a Fatal Result.—Cases of Symblepharon treated by a Skin Flap.

THE annual general meeting of this Society was held on the 4th inst., the President, Dr. Hughlings Jackson, in the chair.

Dr. ADOLF BRONNER (Bradford) recorded three cases in which Concussion of the Eyeball in patients with a history of congenital syphilis had given rise to Interstitial Keratitis and peripheral choroiditis. 1. A girl aged fourteen was hit on the left eye with a shuttle at the mill. Interstitial keratitis set in, and seven months afterwards the cornea of the right eye became similarly affected. 2. A man aged twenty-two was struck on the left eye with a piece of coal. The cornea was steamy the next day, and typical syphilitic interstitial keratitis set in, and in ten days the right cornea was also affected. In this case there were brown-black patches of choroidal pigment in the periphery of the fundus. 3. A boy aged nine was struck on the left eye with a dart. Three weeks afterwards he noticed that he could not see so well with that eye. The cornea and media were clear, but there was a patch of choroidal absorption near the macula and peripheral choroiditis. Dr. Bronner thought that, from a legal and also therapeutic point of view, it was of great importance to know if concussion of the eyeball could cause a local outbreak of latent congenital syphilis. He thought that this did occur very frequently, but was overlooked.

Dr. ROCKLIFFE (Hull) communicated a case of Cephalic Tetanus following a Penetrating Wound of the Orbit. The patient, a boy aged seven, received a slight penetrating wound of the left orbit from a fall. Two small pieces of thorn suppurated out on the seventh day. On the tenth day he complained of stiffness of the left face and neck, which was followed by spasmodic contractions of the left side of the face, complete right, partial left ptosis, with flattening of the left side of the face, and inability to open his mouth. The wound and orbit were explored and thoroughly washed out with percbloride of mercury solution; the spasms, which disappeared under chloroform, continued to increase, and became more general, even to opisthotonus, until the twelfth day, when they began to decrease, and entirely ceased in three weeks. The facial paralysis, ptosis, and inability to open the mouth remained for some weeks afterwards. Three months after the accident the only symptoms were slight drooping of the left lid and diplopia on convergence for near objects, both of which were decreasing.—The PRESIDENT inquired if paralysis of the portio dura was at all usual in cases of tetanus. He did not remember to have seen an instance.

Dr. ROCKLIFFE also read notes of a case of Pyæmic Panophthalmitis occurring in both eyes in a patient aged thirty, who miscarried in the sixth month of her fifth pregnancy, and subsequently suffered from septic poisoning. The ocular symptoms commenced on the thirteenth day, and the vision was completely lost in forty-eight hours; suppuration of the vitreous and of the orbital cellular tissue followed, with considerable proptosis of both eyes. She also had ischio-rectal abscess and abscess of the left forearm. In a month the suppuration of the orbit ceased and both eyeballs shrank. The patient regained her general health in three months. The ocular inflammation was considered to be probably embolic in its origin.

Dr. GEORGE A. BERRY (Edinburgh) communicated a note on the Operative Treatment of Scleral Wounds, in which he drew a contrast between the course of perforating wounds of the sclera as compared with similar injuries to the cornea. The more unfavourable termination of the former he attributed to greater liability to infection, owing either to the imperfect apposition of the lips of the wound, or to the absence of that copious outpouring of lymph or gush of aqueous which carried away micro-organisms when the cornea was wounded. He considered the most effectual

method of removing and excluding micro-organisms consisted in thoroughly washing with corrosive sublimate solution, and then detaching and stretching the conjunctiva across the opening in the sclerotic, and compared this method to the converting of a compound into a simple fracture. He was averse to direct suturing of the sclera on account of the risks and complications it introduced, and considered it practically impossible to keep a wound in the conjunctival sac aseptic by means of lotion or dressing. It was usual for him to remove a portion of conjunctiva on one side of the wound, so that the suture subsequently introduced might not be directly over it. Any portion of prolapsed vitreous might be snipped off after the introduction of the stitches and before they were drawn together.

Mr. SIMEON SNELL (Sheffield) recorded a fatal case of Acute Cellulitis of the Orbit, occurring in a young girl of fourteen, and following a swelled face due to carious teeth. Two teeth had been removed from the upper jaw on the corresponding side, and subsequently, while the face was still swollen, the patient had been for a drive on a cold day in an open trap. When seen a fortnight later there was great swelling of the lids on the right side, with proptosis and œdema of the conjunctiva. There was apparently no affection of sight, but ophthalmoscopic examination was not possible beyond that which sufficed for the observation that the media were clear. There had been considerable pain in the orbit, with headache and vomiting. Three days later a considerable quantity of pus was let out by an incision through the inner third of the lower lid. Its escape afforded great relief, and the eyeball resumed its normal position. Two days later, however, the patient was much worse; there was great pain, extending to the occiput, with vomiting and retraction of the head. She passed into a comatose condition, and died the following day. There were no convulsions, but the pain in the head was complained of as long as she remained conscious. The condition of the orbit appeared quite satisfactory, and the drainage tube had been removed. A post-mortem examination was not allowed. It was ascertained that at the extraction of two teeth from the upper jaw there was a discharge of very fœtid pus, and the bone immediately around the roots was necrosed, the gum being inflamed and turgid. The teeth were badly decayed, the dentine being thoroughly softened. There could be no doubt that in this case the condition resulting from the carious teeth was the immediate cause of the necrosis and orbital cellulitis. Mr. Snell referred to two somewhat analogous cases which he had seen, one published in the *Ophthalmic Review*, 1882, the second in the current number of that journal.

Mr. EDGAR BROWNE (Liverpool) reported two cases of Symblepharon which he had successfully treated by a skin flap. He had done this operation many years ago, but his procedure differed from that lately recommended by Professor Snellen in that he stitched the flap to the eyeball, whereas Snellen applied the flap to the conjunctival surface of the eyelid.—Mr. SILCOCK said he had performed the operation in question, and had shown the case before the Society. He could not speak of it in such glowing terms as did Professor Snellen. There was much thickening of the skin flap, which had not subsided after the lapse of some months.

The following cases and card specimens were shown:—

Mr. BRAILEY: Result of Operation for Immature Cataract.

Mr. STANFORD MORTON: (1) Foreign Bony beneath Semilunar Fold; (2) Aneurysms of Retinal Arteries.

Mr. HOLMES SPICER: Congenital Dislocation of Lenses.

Mr. W. EDMUNDS: Retinal Changes in Leucocythæmia.

Mr. LAWFORD: Ophthalmoscopic Drawing of Embolism of a Retinal Artery.

Mr. P. WELLS: Subhyaloid Macular Hæmorrhage.

Mr. DOYNE: (1) Perforation of a Cornea and Lens by a chip of steel, without subsequent Opacity of Lens; (2) Atrophy of Retina.

Mr. GUNN: (1) Lymphatic Nævus of Conjunctiva, with Microphthalmos; (2) Persistent Mydriasis and peculiar Cataract following wound of Globe.

Mr. ADAMS FROST: Congenital Abnormalities of Optic Disc.

The annual general meeting was held at 9.30 P.M. The report of the Council having been read by the Secretary, its adoption was moved by Mr. Tweedy and seconded by Mr. Doyne. An amendment, proposed by Mr. Brudenell Carter, and seconded by Mr. Frost, was lost, and the original motion carried. The treasurer's balance sheet was then presented. Mr. Nettleship moved, and Dr. W. J. Collins seconded, a vote of thanks to the retiring President and other members of the Council, which was carried unanimously. The officers for the ensuing year were elected, and the meeting terminated.

CAMBRIDGE MEDICAL SOCIETY.

A MEETING of this Society was held on June 6th, Dr. Latham, President, in the chair.

Extra-uterine Gestation.—Dr. GRIFFITH began by giving a short sketch of the recent advances made in our knowledge of the Pathology of Extra-uterine Gestation, the most important, perhaps, being that relating to the development in the broad ligament, to which Mr. Lawson Tait and others had recently directed attention. He exhibited a specimen in the fourth month of pregnancy illustrative of this condition. He determined to discuss the treatment apart from the diagnosis, on the grounds that it was impossible to discuss the treatment of a disease unless the diagnosis was assumed; he would only now inquire what should be the guiding principles of treatment in cases in which the diagnosis had been made, neglecting the manner in which this had been done. It seemed to him that the best way to approach this subject was to divide the whole period of extra-uterine gestation into four parts—viz., the period before severe symptoms or rupture occurred, the period of and immediately after rupture, the period of advanced gestation, and the period after the death of the fœtus. Of these four periods he would begin by taking the first and fourth, because he was of opinion that the time had arrived in which it was possible to state dogmatically the principles of treatment which should be adopted during these periods. It has often been said that diagnosis was impossible before the grave symptoms of rupture occurred. This Dr. Griffith did not admit; at the same time, he acknowledged what was obvious to everyone who had experience of these cases, that it was only under exceptional circumstances that these cases came for investigation during this period, and that of these only in those cases which were under favourable conditions for physical examination was the diagnosis likely to be made with sufficient certainty to justify operative interference. He had himself on one occasion given a written opinion on a case in the beginning of the second month. The diagnosis was verified some time after by Mr. Alban Doran, who performed abdominal section and removed the fœtus. The treatment for the first period is abdominal section and removal of the cyst. All other methods—such as paracentesis, the injection of morphine or other drugs, and electrolysis—should be discarded. The operation should be performed with as little delay as possible. The treatment of the last period is based upon the knowledge of the fact that, with rare exceptions, suppuration of the sac takes place within from six months to two years after the death of the fœtus, and that, unless this suppurating sac is emptied in good time, it generally places the patient's life in great danger. Therefore the treatment is to empty the sac. If, in any particular case, it is considered desirable to delay the operation beyond that required for the diminution of the active circulation in the walls of the sac, further delay should not be permitted if the patient begins to lose flesh and a healthy appearance and acquires a night rise of temperature. It is, of course, necessary to admit that the diagnosis of cases in this stage is made not infrequently only in the course of an exploratory operation. There is one point in the procedure of the operation of emptying the sac which is affected by the preliminary operation. There is no doubt that it is best, if practicable, to open the sac without opening the peritoneal cavity, it being quite impossible to remove it in a large proportion of cases, and for other reasons. The incision, therefore, should be made over the centre of the sac, which is generally considerably to one side of the linea alba. If a preliminary median incision has been made, but the diagnosis is arrived at without opening the sac, the incision should be closed and a fresh one made, unless the sac is sufficiently free to be removed entirely. The treatment of the second period is a question more difficult to determine precisely. There are only two alternatives—leaving the patient alone or opening the abdomen—

for us to choose. If we accept the teaching of some, that the rupture of the cyst is uniformly fatal, we should not hesitate to accept the rule that in every case, if the patient is not too collapsed to bear the operation, and an operator having the necessary knowledge and skill can be obtained, the operation of removal of the cyst should be performed. Those of us, however, who have carefully observed many cases during this period in which no operative interference has been performed must admit that a considerable number of these cases recover well without it. Is this proportion of cases sufficiently large to affect the rule above stated? Dr. Griffith's opinion was that the rule should be to operate in cases seen very soon after the rupture, and that the cases which might be fairly left are those which are seen after the first dangers have quite passed off, and the longer the time that had elapsed the less likely will be the need of operation, provision, however, being made for operation in case of any recurrence of dangerous symptoms. In the third stage the question to be decided in each case is whether to wait until after the death of the fœtus or to operate with the view of saving the life of the child. There are several points which may be discussed; in such cases some are in favour, others against the advisability of operation; but the point which will always deter operators is the unknown danger of hæmorrhage, which at any moment of the operation and for some days after may place the patient in danger almost beyond hope. It is a danger which at present we cannot calculate beforehand; it depends on the site of the placenta and the viscera and structures which form its maternal portion and supply it with blood-vessels. The danger is so great and so incalculable that none but the boldest or least experienced surgeon would lightly undertake operation at this time. Under these circumstances the safety of the mother must alone be considered, and we must adopt the rule, to which, however, there are occasional exceptions, that in advanced extra-uterine pregnancy it is better not to interfere, but to wait until the fourth stage has been arrived at.

Notices of Books.

The Constitutional Requirements for Tropical Climates and Observations on the Sequel of Disease contracted in India. By Sir WILLIAM MOORE, K.C.I.E., Honorary Physician to the Queen, late Surgeon-General with the Government of Bombay. London: J. & A. Churchill, New Burlington-street. 1890. — The information contained in this little volume consists of impressions derived from a prolonged service in the East, and is likely to be very useful in two directions—first, to those who are thinking of going to India, in regard to the climatic conditions, the nature of the life, and the diseases they may encounter there; and, secondly, as to the states of health and physical liabilities which they may bring away with them, or subsequently manifest on returning to this country. As regards the first, the author arranges and briefly discusses what he has to say under separate headings, such as the influence of previous disease and hereditary predispositions, temperament, age, sex, and idiosyncrasy, in coming to a decision as to the class of persons who should or should not go to India, and the relative liability to ill-health and inefficiency, or the reverse, by a protracted residence in that climate. The remarks on the influence of age, temperament, and idiosyncrasy are much to the point. The second part consists of observations on the sequelæ of diseases contracted in India. The subject is a large one, and the treatment of it is not, of course, of an exhaustive character, nor was it intended to be. A number of points are, however, taken up and discussed with much shrewdness and judgment.

Beiträge zur Pathologischen Anatomie und zur Allgemeinen Pathologie. Redigirt von Dr. E. ZIEGLER. Siebenter Band. Jena: Gustav Fischer. 1889-90.—The four "Heften" of which this (the seventh) volume of a high-class periodical is composed contain, as will be seen, numerous important writings on matters of great pathological interest and importance. The papers, some of which are worthy of the title of monographs, are the following:—1. On the "Experimentum Crucis" of the Phagocyte Doctrine, by Prof. Baumgarten (Tubingen). 2. Researches on the Degeneration of Pathogenic Bacteria in Distilled Water, by Dr. Curt Braem (Konigsberg). 3. On the Immunity of Pigeons from Anthrax, by Dr. Eugen Czaplewski (Gobersdorf). 4. Experiments on the Disinfectant Properties of Solutions of Nitrate of Silver, by Dr. Gustav Jerosch. 5. A Case of Cysticercus at the Base of the Brain, with Arteritis Obliterans Cerebralis, by M. Askanazy. 6. The Causes of the Organisation of Thrombi, by Dr. Rudolf Beneke (Leipsic). 7. On Secondary Implantation of Hairs in Dermoid Cysts, by Dr. G. Hildebrandt (Konigsberg). 8. On the Reaction of Tissues to Specific Irritants, by Dr. G. Cattani (Bologna). 9. Pathology and Pathological Anatomy of Rabies, by Dr. Karl Schaffer (Buda-Pesth). 10. Contribution to the Study of Congenital Malformations of the Heart, by Dr. Hugo Preisz (Buda-Pesth). 11. On Hygroma of Tendon Sheaths containing Riziform Bodies, by Dr. Edwin E. Goldmann (Freiburg). 12 On Nuclear Division and Giant-cell Formation in Tumours and Bone Marrow, by Dr. Hermann Ströbe (Freiburg). 13. On Parasites within the Cells of the Pancreas of Amphibians, by Julius Steinhaus (Warsaw). 14. Studies on the Bacillus Typhosus, by Walter Cygnæus (Helsingfors). 15. On Non-Congenital Hydrophthalmus, by Dr. Francesco Falchi (Pavia). 16 The Function of the Cœliac Plexus, by Alex. Lustig (Cagliari). 17. On Functional and Genetic Relations of the Adrenals to other Organs, especially to the Cerebrum, by Dr. R. Zander (Konigsberg). 18. On the Behaviour of the Hypophysis of the Rabbit after removal of the Thyroid Gland, by Dr. Hermann Stieda. 19. An Oil-containing Dermoid Cyst with Giant Cells, by Dr. E. E. Goldmann. 20. Bacteriological Researches on Tetanus, by Dr. Guido Tizzoni, Dr. Josephine Cattani, and Dr. Elia Baquis (Bologna). 21. On the Transmissibility of Leprosy, by Dr. F. Wesener (Freiburg). 22. On Forms of Intermittent Fever in Malaria with Long Intervals; Differentiation of the Forms of Malarial Fever, by Dr. Camillo Golgi (Pavia). The volume contains twenty-five excellent plates.

Atlas von Beleuchtungsbildern des Trommelfels. Von Dr. KURD BÜRKNER. Zweite verbesserte Auflage. Jena: Verlag von Gustav Fischer. 1890.—This atlas of diseases of the membrana tympani is excellent. It contains fourteen plates, each of which has six coloured drawings, which have been carefully and truthfully executed. In some respects they are better than Hinton's, as they are not so highly coloured. Inasmuch as Hinton's atlas is now out of print and very "scarce," Bürkner's should have a good sale. Each plate is accompanied by an explanatory text, which is strictly confined to what is seen in the drawing. There is a table of contents and an index, by means of which the reader is able at once to refer to the drawing of the particular condition of which he is seeking an illustration. The book will certainly be extremely useful to those who are trying to educate themselves in diseases of the ear; and for teachers who wish to explain what the pupil ought to see it will prove of very great assistance. On these grounds we can confidently recommend the volume to those who are interested in the subject.

Agenda du Chimiste. Par MM. SALET, GIRARD, et PABST. Paris: Hachette et Cie. 1890.—This excellent little manual has become essential to every chemist, and to all who are interested in the applications of chemistry. It consists to a great extent of tables of physical and chemical constants, as, for example, to quote two very excellent sections, the

thermal equivalents of combination, solution, &c., and the spectra represented by wave lengths of the most important elements. These tables are accompanied by clear and succinct explanations and an enormous mass of useful practical directions. It is astonishing how much valuable matter has been condensed into so small a space. In the present edition the authors have brought the work quite up to date.

New Inventions.

THE AUTOMATIC MEDICAL BATTERY.

THE automatic medical battery came before us with so many advertised claims, we were at first somewhat sceptical in regard to it, and have held notice of it back, in order to subject it to the best trials. It has now been in use with us for nearly three months, and we can say of it that it has not disappointed us in one particular. It is strictly automatic in action, starting into play immediately it is opened, and stopping immediately it is closed; and it has

never once required to be charged or in any way modified. It is constructed on what is called the gelatine plan, the current being generated by gelatine battery cells, which are semi-solid and well sealed, so that there is no escape of liquids or of anything objectionable in the way of vapour. The battery is also small, portable, and convenient, either at the bedside or in the consultation room. It gives three currents—the "galvanic," the "faradaic," and the "galvano-faradaic,"—easily varied and changed according to the requirements of the practitioner.

NEW HANSOM CAB.

MESSRS. F. and R. SHANKS, of Great Queen-street and New Bond-street, are introducing a new form of private hansom, which I think deserves notice from the medical profession. Although more "roomy" than the ordinary hansom, the weight has by a judicious use of materials been reduced by one cwt. below that of most cabs. The chief characteristic of the carriage, however, is in the construction of the door, which is made in one piece, and which turns forward on pivots below the level of the foot-board. The present "over-head" folding glass has been entirely dispensed with, and a front glass placed in the door itself, so that the occupant of the carriage can raise the glass to any height, as in the ordinary brougham. The advantages which this gives are manifest; for in the present hansom the rider has in rainy weather the choice of two evils—

either to be exposed to the wet or to be partially suffocated when the folding window is lowered. Messrs. Shanks have eradicated the main fault of the ordinary hansom from a hygienic point of view by the protection which this front glass affords against weather. The cost does not exceed that of the best private hansom. J. F. SPONG, M.R.C.S.

ACUTE RHEUMATISM.

To the Editors of THE LANCET.

SIRS,—Dr. Robert Bell, in his very interesting "Observations on Acute Rheumatism,"[1] suggests that salicine and its allies act as antiseptics by destroying or paralysing the disease-producing organism. He also says: "It has been suggested that salicine and its compounds tend to rid (*sic* ?aid) the kidneys in the evacuation of this substance" (uric acid).

As I am the author of one such suggestion in a paper read at the Royal Medical and Chirurgical Society, April, 1890,[2] I should like to say a word on the subject. I thoroughly agree with Dr. Bell as to the bad effects of constipation, but differ from him as to the explanation of the fact; for I have shown[3] that constipation, by favouring the absorption of acid from the large intestine, raises the acidity of the urine and diminishes the alkalinity of the blood, so that it not only brings about an accumulation of uric acid in the body, but may also account for its precipitation into the joints in acute rheumatism. I have also pointed out that the converse holds good, and that drugs like colchicum, which cause intestinal irritation and diarrhœa, reduce the acidity of the urine and increase the alkalinity of the blood.[4] The former action does harm in joint troubles due to uric acid, the latter does good, just as a dose of alkali does. If salicine acts as an antiseptic, how do alkalies act (and some still consider them almost on a par with salicylates)? how does a milk and farinaceous diet act? or, again, hot baths and gruel without drugs? Obviously they all lower the acidity of the urine and raise the alkalinity of the blood, just as does Dr. Bell's own treatment of keeping the lower bowel empty by enemata. I hope Dr. Bell will read my paper when it appears in the next volume of the Medico-Chirurgical Transactions, as I think he will see that the most simple facts about the excretion of uric acid suffice to explain the action of all the drugs which are useful in acute rheumatism, while the somewhat problematical micro-organism and antiseptic action of salicine afford at best but a partial explanation.

I am, Sirs, yours truly,

Welbeck-st., July, 1890. A. HAIG, M.D. Oxon., F.R.C.P.

[1] THE LANCET, vol. ii. 1890, p. 16.
[2] Ibid., vol. i. 1890, p. 902.
[3] Wood's Monographs, New York, Feb. 1890, p. 326, and elsewhere.
[4] Ibid., p. 327.

THE LANCET.

LONDON: SATURDAY, JULY 19, 1890.

THE proposal to place Fellows of the Irish and Scottish Colleges of Surgeons on the same footing as regards eligibility for hospital appointments with Fellows of the Royal College of Surgeons of England has been lately debated in Bristol, and has been rejected by a large majority. The result cannot be set down to any want of ability in the statement of the argument for the more liberal course, as our readers will gather from the report we gave last week. Mr. JAMES STEWART held a brief for the Irish Colleges and Dr. MARSHALL for the Scottish ones, and whatever can be said for recognising the equality of the diplomas was said very well. Mr. STEWART alleged that nothing could be more severe as test of the highest attainments than the examinations to which Irish Fellows were submitted; and, apparently with every consciousness of strength in his case, he expressed his willingness to submit the question of the comparative severity of the examinations of the Irish and English Colleges to a jury of medical men selected by the monopolists, as he was pleased to call them. Mr. STEWART does not speak from personal experience of the examination for the Fellowship of the Irish Colleges, for, though a Licentiate of the Royal College of Surgeons of Ireland, he holds the Fellowship of the Royal College of Physicians of Edinburgh. He did not testify to the severity of the ordeal by which this latter title was attained, though evidence to this effect would have been helpful to the main purpose of his argument, and very useful to the Scottish corporations, who so far appear weak and hang back in this controversy. But few, we imagine, will question the practical equivalency in severity of the examinations for the Fellowship of the English and of the Irish Colleges of Surgeons, or the fairness of the challenge to let the advocates of monopoly decide the fact. Dr. MARSHALL vindicated the Scotch qualifications. He spoke with pride and with force as a graduate of the University of Edinburgh and a Fellow of the Royal College of Surgeons of Edinburgh. In virtue of these qualifications he held the office of consulting surgeon to the Bristol General Infirmary, having taken office, we presume, under more liberal rules than obtain now. He averred that it was most untrue to say that the diplomas of the London Colleges were higher than those of any similar body. He admitted that at one time the Edinburgh College used to confer its higher qualification on distinguished men as a supplementary honour. He declared that that was altered now, that the examinations of the Scotch Colleges were equal to those of any College in England, and that the examination for the Fellowship of the Edinburgh College of Surgeons was now so severe that only three out of twelve candidates passed at a recent examination. On the other side was Dr. MARKHAM SKERRITT, who till he came into connexion with Mr. STEWART never heard it asserted that other Colleges were equal in reputation to that of London. As regarded the degree of C.M. of the Scotch Universities, it was, he said, simply picked up by any M.B. who chose to pay the additional fee. Mr. COE, a Fellow of the English College of Surgeons by examination, said deliberately that the Fellowship examinations of the Scotch and Irish Colleges are quite as stringent as those in England, and quoted, as a previous speaker had done, Professor HUMPHRY in favour of abolishing all exclusiveness.

It is painful to think that all this conflict of evidence on matters of fact was displayed in open meeting and published to the world in newspapers. The unseemliness of such a controversy between men in a liberal profession, acting under a Medical Act which recognises no territorial limits to the qualifications which it registers, is itself an urgent reason for the alteration of all rules which cannot be obviously justified. To the laymen present the spectacle of such a difference of doctors must have been unedifying and in the highest degree embarrassing, each nationality declaring its own Colleges to be perfect and superior to those of the sister countries, as if Great Britain were a parish, or as if the course of arteries and remedies for disease were different on opposite sides of the Tweed or of the Irish Channel. This controversy must have an end. Though the immediate result of the Bristol discussion is encouraging to those who would claim for one division of the kingdom a monopoly of superiority and privilege, the final result will be different. It is evident that the spirit of the age is against all such exclusiveness, and such discussions as that at Bristol, and such inquiries as that before the Lords' Committee on Hospitals, will bring about the more liberal rules which are demanded. Sir SYDNEY WATERLOW struck the true note in his recent evidence before the Lords' Committee. Speaking for St. Bartholomew's Hospital, he said they would not hesitate to recognise other than London diplomas, *provided the standard were maintained.* This is the only point to be insisted on. But this must be insisted on. We cannot wonder that some delay occurs in accepting the evidence of men who have not recently passed examinations. The very recency of examinations for the Fellowship in Scotland is an excuse for their existence and their severity not being yet realised. The Scotch corporations have themselves to blame for this delay. The Irish and Scottish bodies could easily procure impartial and unanswerable evidence of the stringency of their examinations if they set about devising means of doing so and spending a little money over the necessary inspections. They owe it to their Fellows to procure such evidence, which is not to be found merely either in printed curricula or in the rejection of three out of twelve candidates.

WE receive letters from time to time protesting against the practice of sending invalids upon long sea voyages, and painting in dark colours the discomforts and even hardships of life at sea. Many instances are brought forward where, especially in cases of advanced pulmonary disease, nothing but mischief and disappointment have resulted from this now favourite prescription; and we are asked to use our influence in making the true facts known, and in uttering the warnings which, in the opinion of some, these facts

warrant. The points especially emphasised by some of our correspondents and by various writers are the following: The confined and vitiated air of the sleeping cabins; the contact with invalids, some of whom are far advanced in disease; the impossibility of securing cookery adapted to the needs of the dyspeptic; the enervating character of the heat encountered in the Red Sea by those taking the Suez route to Australia, and the injurious nature of the cold sometimes encountered in the Southern Ocean by those who travel *viâ* the Cape; the interruption of healthy exercise and amusement which continued bad weather occasions; and, lastly, the inconvenience, expense, and rupture of home ties which a distant sea voyage involves. This is a sufficiently serious list of drawbacks, and of some of those enumerated we are by no means disposed to make light. But every form of climatic treatment has its disadvantages, and the cause of scientific truth, and therefore of sound practice, is not likely to be advanced by those who concentrate their attention upon the disagreeable features of sea life and ignore its peculiar and remarkable advantages. The sea voyage is, in fact, sharing just now in the odium which sooner or later befalls every new form of treatment when its popularity is such as to lead to its indiscriminate adoption. The number of invalids who go to sea has increased with extraordinary rapidity during the last ten years. Some of these are properly selected cases, and such as a rule derive benefit from the sea voyage; but others go to sea either without proper advice or in defiance of it, some as a last resource, when other measures have failed, and among such cases the disappointments and disasters are numerous and deplorable. But the natural reaction must not be allowed to run to extremes. The course of medical opinion in France upon this very question may well serve as a warning and instruction to us. In that country, the writings of ROCHARD and LEROY DE MÉRICOURT had the effect for a time of almost completely discrediting the sea voyage in professional and public favour, but to-day, thanks largely to the labours of Professor PETER, its popularity has been regained, and that too among people not prone to maritime pursuits.

We shall first point out some of the peculiar, and in our opinion quite incomparable, advantages of the sea voyage, and then make some comments upon the drawbacks and hardships which have been alleged, with some measure of truth, against it. We have first to take account of the absolute purity of the air at sea. In this respect the sea voyage stands alone, and must be accorded the palm even over sanatoria situated among the mountains or upon the desert. No doubt this purity of the air prevails only upon deck, and the atmosphere in the saloons and sleeping cabins often becomes foul, especially during the prevalence of rough weather. But the average proportion of time spent upon deck is very high. In fine weather there is nothing to prevent the voyager from being almost continuously on deck, except during meals, from 8 A.M. to 10 P.M. The equability of the ocean climate is such that no chill is felt at sundown, and even a delicate invalid can, in the warm latitudes, remain on deck after sunset without risk. It would be difficult to name any sanatorium ashore where the same amount of open-air life can be enjoyed with impunity. If ships which cater for the invalid traffic would scrupulously avoid overcrowding in the sleeping cabins, and pay the most vigilant attention to cleanliness and ventilation, it is our opinion that the traveller by sea would enjoy a larger proportion of perfectly pure air than can anywhere else be obtained. That these primary and indispensable conditions are very widely ignored is unhappily true; but such errors are clearly remediable, and will no doubt disappear when their true nature is sufficiently realised.

The next remarkable advantage of the oceanic climate is its equability. Sudden changes of temperature are extremely rare upon the high seas, inasmuch as all the winds are sea breezes, and all are moisture laden. A very equable climate may be unduly sedative, and even depressing; but at sea the almost constant prevalence of tonic and refreshing breezes averts this drawback.

Perhaps the most unique advantage of the ocean voyage is the absence of all the usual cares and excitement of life. Letters, telegrams, newspapers, appointments, visitors, none of these trouble the voyager on the high seas. This restfulness and freedom from worry, so invaluable in many cases of nervous breakdown, can only be obtained upon the long sea voyage, and cannot be claimed for the coasting trips, now so popular, where some port is touched at every day or two, and the voyage is hence a succession of petty excitements. This class of voyage may prove of service to those needing only rest and change, but is unsuitable to most cases of serious disease.

As regards the objections commonly urged against the sea voyage, some of them must be allowed considerable weight, while others have undoubtedly been painted in unduly dark colours. The evils arising from overcrowding and imperfect ventilation in the sleeping cabins are exceedingly serious and cannot be extenuated. We have already indicated how, in our opinion, they may be obviated. Unless the invalid, above all the phthisical, can be assured of comfortable sleeping quarters and a reasonable amount of space, he will be best advised not to venture upon the sea voyage. The unduly close contact with persons far advanced in disease, which is sometimes almost inevitable on shipboard, is also a point of indisputable importance. There is much to be said for two suggestions that have been thrown out with a view of meeting this difficulty—viz., that precautions should be taken against letting cabins to persons whose condition of health might be a source of peril to those around them; and, secondly, that every ship catering for invalids should be provided with a properly equipped hospital, to which the ship's surgeon should have authority to remove all moribund cases.

As regards the question of cookery at sea, we think it would be a mistake to make a very grave difficulty about it. Persons who can only subsist upon a purely invalid dietary are, in nine cases out of ten, wholly unsuitable for the sea voyage, and should try some other mode of treatment. To those who can digest solid food, and who have enough self-control to avoid injurious dainties, the bill of fare on good vessels presents an ample variety of wholesome articles.

The heat of the Red Sea and the cold of the Southern Ocean will be best met by the invalid choosing the proper season for his voyage. The Red Sea can be traversed without serious inconvenience from November to April, and the

cold of the South Seas, although often considerable, can be encountered with comparative impunity during the summer of those regions. The real difficulty in this latter case is that the captains of sailing vessels are often tempted to run too far to the south, on account of the favourable winds which commonly prevail in those high latitudes.

We have not space to enter particularly into the question of the various classes of invalids for whom the sea voyage is specially suitable. To put the matter briefly, we may say that benefit may be fairly hoped from the sea voyage in the following cases: Nervous breakdown from overwork, excessive study, or harassing cares; impaired convalescence after specific fevers or acute disease; scrofulous affections; diseases of bones and joints; some forms of anæmia; early phthisis. The last case is the most important of all, especially as we believe the sea voyage owes by far the largest part of the odium and discredit which have fallen upon it in some quarters to the utterly unjustifiable and mistaken policy of sending advanced cases of phthisis to sea. Inasmuch as such persons often undertake a voyage in defiance of medical advice, it is obviously unfair to blame the profession for all the disasters which so often befall this class of invalids. But we cannot be too clear in our teaching that for patients in whom tubercular disease is far advanced and active the sea voyage is completely unsuitable, for reasons too numerous to state and too obvious to need enumeration. In early and quiescent phthisis, on the other hand, it is probably one of the most potent remedies known to us.

We may sum up our view of this somewhat hotly controverted question by saying that the oceanic climate is one of high salubrity and great adaptability to many cases of disease; that to obtain its advantages practitioners must impress upon their patients the necessity of endeavouring to secure comfortable quarters, pure air by day and night, and a wholesome and sufficiently varied dietary; of arranging the time and direction of their voyages so as to secure a maximum of fine and temperate weather with a minimum of extremes; of in most cases preferring the monotony of the long ocean voyage to the excitements of a coasting trip; and that, lastly, an invalid must only undertake the very serious step of deciding upon a long voyage when he has been assured by competent medical authority that his case is such as to afford reasonable hope of benefit from this much-abused, but nevertheless invaluable, resource of therapeutics.

THE Housing of the Working Classes Bill, as amended by the Standing Committee on Law, is now published, and it is thus possible to see the scope of the measure which is to be employed for the improvement or removal of unhealthy dwellings, and for the clearance of insanitary areas. It is, of course, possible, and indeed probable, that the measure will be subjected to some amendment and alteration before it finally becomes law, but these changes will affect detail rather than principle. It is impossible to study the Bill without being impressed with the very considerable efforts that have been made to provide local sanitary authorities with useful machinery for improving the condition of their districts so far as dwelling-houses are concerned. Mr. RITCHIE, with the practical common sense which characterises all his actions, has embodied in the Bill many notable improvements of the existing Acts, and in this he has been ably seconded by Lord COMPTON, whose familiarity with the subject matter has been evidenced throughout the passage of the Bill through Committee.

In the new measure the familiar names of CROSS and TORRENS have disappeared, but the Bill is divided into three parts, the first of which is Cross's Acts amended, and applies to all but rural districts, in London the County Council being the local authority; the second part, which contains many of the sections of Torrens' Acts, applies to every sanitary area, including rural as well as urban districts; and the third part, containing the provisions of Lord Shaftesbury's Acts, applies to the same sanitary areas, but cannot be adopted in rural districts without the consent of the County Councils.

We note, in the first instance, that unhealthy areas may be cleared whenever their defects can be shown to be dangerous or injurious to health. The introduction of the word "dangerous" gives considerable extension to the powers hitherto possessed by local authorities, and will give opportunity for Cross's Acts to be applied to areas even when injury to health cannot be proved. We believe this to be a sound principle, and we are glad to see that it is further accepted in respect of obstructive buildings which it may be necessary in the interests of health to remove.

In the second part of the Bill an important power is given to district authorities for clearing areas which are too small for the application of Cross's Acts. The procedure is much the same in regard to small as large areas, but for the former the order of the Local Government Board only requires confirmation by Parliament if a petition be presented against the order. The Bill does not attempt to define the size of an area which is to be dealt with by one or the other provision, but there is an important distinction between the two—viz., that in the large area the rehousing of a portion of the working-class population displaced is a necessity, and in the other it is not. The new power will be very serviceable in bringing about the removal of single courts and alleys which exist in many large towns, and which, from their narrowness or from the bad arrangement of the buildings, render the houses dangerous to health.

The procedure under Torrens' Acts for dealing with single houses has been regarded as unworkable, and has been altogether abandoned. Under the new Bill houses dangerous to health, so as to be unfit for human habitation, must be closed by magistrates' order, and their subsequent demolition is made dependent upon the willingness or the ability of the owners to put them into wholesome condition. Local authorities, both of urban and rural districts, will be empowered to require their demolition, after closure, as soon as they have become dangerous or injurious to the health of the public or of the inhabitants of the neighbouring dwelling-houses. It is probable that the loss of rent will be a sufficient incentive to the owners not to delay the improvements which will have to be effected before such houses may be again occupied.

It is to be hoped that the new clauses, determining the amount of compensation to be paid when houses are demolished either in unhealthy areas or because they are ob-

structive, will give greater encouragement than hitherto to local authorities. Until they have been tested by actual proceedings, it is impossible accurately to estimate the results; but if the arbitrator be guided by the spirit in which the clauses have evidently been conceived, the improvement of towns ought to be effected with much less cost than before.

The newly appointed County Councils are largely utilised in the Bill for securing the enforcement of its provisions by local authorities. In London particularly the Council is empowered to put local authorities in motion; and in regard to small areas they may themselves take proceedings for preparing and obtaining the confirmation of a scheme under the second part of the Bill, and may apply to the Secretary of State for a contribution by vestries and district boards towards the expenses they incur. Under these circumstances, assuming that proper activity is shown in administration, it should be possible for a vast improvement to be effected in the dwelling accommodation of poor persons. To a large extent the Bill provides for demolition, but, apart from the requirements as to rehousing of the displaced population when areas are cleared, the provisions of Lord Shaftesbury's Acts are incorporated in the Bill, by which local authorities may themselves undertake the work. It will be interesting to watch how far these powers become utilised.

M. ALFRED BINET has recently communicated to the *Revue Philosophique* some interesting observations which he has made with regard to the movements of infants. The first question to which he directed his attention was the way in which they learn to walk. He maintains that the attempts to walk are instinctive, and not the result of education. Among other grounds he draws attention to the more or less coördinated treading movements that even an infant of only three weeks will keep up if the soles of its feet are allowed to touch lightly a suitable surface. He believes that the time at which a child learns to walk depends not merely on bodily conditions, such as firmness of the bones, good muscular power &c., but also on the mental characteristics of each child. Thus, he thinks he has established the fact that a child who can give its attention to placing its steps, and whose attention is not easily distracted, learns to walk at an earlier age and in a shorter time than more restless children. He maintains further that "the boy makes the man," and that such children are characterised in later life by the important faculty of close application to work. M. BINET also directed his observation to the restless movements of young infants, which have been so carefully studied in this country by Dr. FRANCIS WARNER. He draws special attention to the fact that these movements are almost always bilateral, the two sides being affected either synchronously or alternately. This tendency to bilateral movement is to be noticed not merely in infants, but may also be traced in children of seven years old. If a rubber ball connected with a tambour of a revolving blackened cylinder be placed in each hand of an intelligent child, and he be told at a given moment to squeeze with one hand only, the tracing almost invariably shows that the ball had been also squeezed, although to a much less extent, by the other hand. A similar apparatus was employed to estimate the "reaction time" which elapses between the giving of a signal, and the performance of a prearranged movement. A tuning-fork was arranged to mark fractions of a second on the revolving cylinder, and the signal was given by a bell, which marked the cylinder as it was struck. The child then squeezed the ball as quickly as possibly. The average "reaction time" with four children, whose ages ranged from three to seven years, was just double that obtained with the same apparatus in the case of healthy adults. The duration of the contraction was also more prolonged, the average in the children being three times as long as that in adults. M. BINET describes with less exactness the very complicated automatic movements which may be excited in an infant by gentle cutaneous stimulation during sleep, and which may not even be noticed by the child when awake if its attention be distracted. M. BINET'S observations are opposed to the views of MILL and BAIN that our ideas of space &c. are the result of education, and not intuitive. He says that a child three weeks old, who he is certain had never had a fall, and therefore could not know by experience that it would be attended by pain, will lie contentedly across a person's outstretched arms, if the hands be placed in such a position as to prevent its slipping down. If, however, the hands and arms be depressed, so that the infant tends to slide down, it will show its fear by at once screaming and struggling. He believes, in addition, that this argues the presence of the muscular sense at this age, in spite of the opposite opinion held by some writers. The same view, grounded on similar observations, was taken by Sir CHARLES BELL in his studies of the subject.

IT is unfortunate that in this country even wise reforms are made with much difficulty. It is only by reverting to the subject again and again that the attention of those concerned can be aroused and the desired reform at last effected. This remark applies in an especial degree to ancient usages, however ridiculous, and long-established customs, whatever may be urged against them. For years past letters have appeared in these columns on the present very objectionable form of taking the oath in an English court of law. A form of words is repeated to the witness by an official of the court, on the conclusion of which the former is requested to kiss a copy of the Gospels (or of the Pentateuch in the case of Jews), which book, by constant usage, has become greasy and otherwise objectionable. Even when witnesses adopt what is really a Royal privilege, and kiss the open page, the objection is only partly removed, since the handling of a book in common with witnesses of all grades is what most would prefer to avoid. To members of the medical profession the grievance is greater, since they, more frequently than other professional men, are called into the witness-box and required to take the oath by kissing the book—except in the comparatively few cases of those who make an affirmation instead of being sworn. Several remedies have been suggested, but it

seems useless to make suggestions until attention has been sufficiently drawn to the grievance complained of. Learned judges and counsel are generally amused when a medical witness calls attention to the subject, and alludes to the possibility of infection when, as is by no means infrequent, a prostitute has been the previous witness. This attitude on the part of judges and counsel arises partly perhaps from the inherent difficulty felt by those in exalted official positions to put themselves in the place of a witness. The swearing-in of learned judges, from the Lord Chancellor down to the last created puisne judge, is very differently conducted; so is that of recorders, magistrates, and mayors. It is witnesses and jurors who are sworn in a manner which cannot be defended, and which is justly denounced in Scotland, France, and other countries where a much more cleanly and solemn method of adjuration is adopted. It has been proposed that those witnesses who prefer to do so should take their own book; and as a glance at it from some official would show that it was a genuine Old or New Testament, the suggestion seems reasonable enough. Another and much better suggestion is that the mode of oath administration should be uniform in the three kingdoms. This could be effected by substituting the Scotch form for that now used in England and Wales. The witness, standing, raises his right hand (a mode of invoking the ALMIGHTY as ancient as that of sacrifice), and repeats after the judge or presiding official, who also stands with uplifted hand, the form of oath. It would, we fear, be hopeless to expect a change on merely medical grounds, the risk of infection being a thing difficult to prove, while the unclean part of the transaction appears to be regarded with indifference. It has been asserted that all natives of Scotland might claim to be sworn in the manner practised in that country, and if this were generally known our Scottish friends would probably prefer to do so. We may strengthen the argument by calling to our aid, not only all aggrieved jurors and witnesses, but those judges, counsel, and others interested in the administration of justice who lament the little sanctity shown to an oath, and the alarming spread of perjury in England and Wales, particularly in the Principality. The English or Welsh witness is silent, merely kissing the book or his thumb in assent. The Scotch witness has to repeat aloud the following very solemn form: "I swear before GOD, and as I shall answer to Him at the Great Day of Judgment when the secrets of all hearts shall be revealed, that I will tell the truth, the whole truth, and nothing but the truth, so help me GOD." The words may vary slightly, but this is their substance. We commend the substitution of the Scotch form of administering the oath as being not only free from the objections already indicated as pertaining to the English form, and, therefore, more agreeable to those who are frequently called as witnesses, comprising a very large proportion of the medical profession, but also as being more calculated to impress witnesses of a lower grade with the solemn nature of an oath. There may be reasons against adding to the duties of judges and magistrates, but the repetition of the words by the witness and the uplifted hand instead of kissing the book is a reform to which no one could reasonably object.

Annotations.

"Ne quid nimis."

THE STORY OF THE INTRODUCTION OF CHLOROFORM.

IN the course of a communication to the *Newcastle Daily Chronicle* Mr. William Park claims for Scotland the honour of having taken the initiative in the first preparation of this anæsthetic, accrediting David Waldie with its discovery. As is well known, and as recently has been insisted on by Dr. Embleton, Newcastle was one of the first places in which chloroform experiments were performed, and the first recorded death under its influence was that of Hannah Greener, which took place at Winlaton, near Newcastle, on Jan. 28th, 1848. But, like the story of all great discoveries, that of chloroform tells of many names. The chloride of "olefiant gas" was formerly called chloric ether, and this was employed in medicine as "an agreeable and diffusible stimulant." Samuel Guthrie of Brimfield, Massachusetts, some time a surgeon in the U.S.A. service, sent to Mr. Silliman, the publisher of the *American Journal of Science and Art*, on May 8th, 1831, a paper in which he described a novel way of preparing this "chloric ether." It consisted in distilling spirits of wine over chloride of lime. The result of this process was of course not "chloric ether," but an impure spirituous solution of chloroform. The paper appeared in October, 1831, and the same writer communicated a fuller account of his method in the January of 1832. Soubeiran appears to have made the discovery of chloroform independently of Guthrie and without any knowledge of his work, but he seems also to have missed the true composition of the substance, for he classed it as "bichloric ether," while Liebig, who examined the new product somewhat later, was led to consider it a "liquid chloride of carbon." In 1834 Dumas rightly determined the composition, and called the body by the name it now bears. So far we hear no word of the anæsthetic properties of chloroform, but in "the forties" Dr. Henry Jacob Bigelow of Boston tried various substances as anæsthetic inhalations, and among them "chloric ether," being incited thereto by the success with which Dr. Morton's advocacy of ether had been met. Both Jacob Bell and Mr. Lawrence employed this substance as an anæsthetic, and, according to Snow, at St. Bartholomew's Hospital and at the Middlesex Hospital trial was made about the year 1847 of chloric ether as a narcotising agent, without, however, much success. This failure seems to have been due to the very impure solution of chloroform employed, to say nothing of its great dilution with alcohol. Simpson in January, 1847, used ether during a confinement, but took exception to the pungent character of its vapour, and so sought for some other agent. He received a visit from David Waldie, the chemist to the Apothecaries' Company of Liverpool, who had for some time interested himself in the preparation of chloric ether, and had succeeded in preparing chloroform freed from the impurities which existed in the London and other samples of the so-called chloric ether. Waldie was a Linlithgow man and a member of a highly intelligent family, being himself a chemist of considerable acumen. The result of the interview between Simpson and Waldie seems to have been that, at the latter's suggestion, Simpson procured a pure sample of chloroform, and published the account of his experience in his well-known "Notice of a New Anæsthetic Agent as a Substitute for Sulphuric Ether in Surgery and Medicine" on Nov. 10th, 1847. Although Waldie had promised to prepare a specimen of pure chloroform for Simpson, he did not do so, the actual substance

being procured in Edinburgh. Perhaps this note on the history of an interesting epoch in surgery can hardly be considered complete without reference to the experiments which the eminent French physiologist Flourens made upon dogs, and published in March, 1847. Flourens states that he chloroformed animals and exposed the spinal nerves, and found the posterior roots insensitive. He concluded from his experiences that chloroform was far too dangerous an agent for use in general surgery, but history has reversed the decision of this great man, as she has that of many another.

PARDONABLE AND UNPARDONABLE ERRORS IN DIAGNOSIS.

THE July number of the *Glasgow Medical Journal* contains a paper by Dr. Russell on Errors in Diagnosis of Infectious Diseases based on recent occurrences in the experience of the sanitary department of Glasgow. The paper is also published separately, and we commend it to the careful consideration of every student and practitioner of medicine. Nobody but a fool thinks diagnosis always easy, and every wise practitioner will learn much from his own mistakes and from the mistakes of others, until he becomes so careful and experienced as to be seldom at fault. Dr. Russell shows how necessary it is for a sanitary authority to make use of these very mistakes. The "authority" exists to prevent the spread of disease. When an error of diagnosis is committed and a case sent as infectious, when it is not so, into an infectious hospital, the patient may catch the infection; still more so when a very infectious disease is taken for one but little infectious,—as when a case of typhus is overlooked and regarded as a cold, or as enteric fever—many others catch the disease, and not a few of them die. The paper is admirable in its details, and in its suggestions for the avoidance of errors. One mistake Dr. Russell thinks almost unpardonable—that is, "certifying a person to have 'fever,' or a febrile disease, when the temperature is normal." Here, the simple expedient of using the thermometer would prevent a mistake. Not, perhaps, always, for we have known cases of unmistakable scarlet fever in which, for a day or two, the diagnosis was uncertain from want of the high temperatures which are generally found in this disease. But certainly the use of the thermometer should never be omitted, and if it records a normal temperature the diagnosis of "fever" should be withheld. Another admirable hint for cases in which a high temperature is found is to make sure of the absence of local disease, such as pneumonia, or pleurisy, or tonsillitis. These should always be looked for. If the practitioner is in any doubt he should wait a day or two till the development of symptoms makes his diagnosis more certain. It is instructive to notice the diseases in which error is most frequent. It is satisfactory to find that in the grave case of scarlet fever errors are not common—only 3 per cent. They were excessive in the case of "enteric," "typhus," "fever," and "diphtheria." Of persons sent into the hospital as suffering from enteric fever, 17 per cent. were not so suffering, and nearly all of these had no infectious disease at all. In forty-two such cases of error, fourteen had pneumonia, five had simple diarrhœa, four disease of the brain, five various chronic diseases, and four had typhus. Ten were absolutely non-febrile. Of the cases certified as diphtheria, nearly 24 per cent. had not diphtheria; half of the errors were scarlet fever cases. Of cases sent in vaguely as "fever" 26 per cent. had no infectious disease whatever. It would be a good rule never to certify "fever" until it is possible to define the fever. "Fever" *per se* means nothing. Errors in diagnosis are least frequent in the diseases of which practitioners see most, as scarlet fever, measles, and whooping-cough. Typhus is rarely seen nowadays out of Liverpool or Glasgow, and hence is the subject of error in no less than 44 per cent. of cases. It cannot be diagnosed till the eruption appears, and this is not the case till about the fifth or sixth day. So consummate and careful a judge as Dr. Murchison well said, "The diagnosis is not always so easy as might be imagined." This is especially true in regard to cases in dark and narrow rooms. The moral of this fact is that students should lose no reasonable opportunity of seeing and studying typhus. It is gratifying to know that the sanitary authority of Glasgow has set an example to all other authorities in placing its infectious hospital at the service of medical teachers and students, and that by the rules of the General Medical Council students are now required to give proof of having had opportunities of seeing infectious cases. With such clear indications of an enlightened wish to advance the study of these diseases, their diagnosis and treatment will be so facilitated as to reduce errors to a minimum, and greatly curtail their prevalence.

DO SAFETY LAMPS INJURE MINERS' EYES?

IN a notice under the above heading which has appeared in our contemporary *The Engineer*, it is stated that miners' agents frequently meet with men who complain that safety lamps have injured their eyes. The difficulty seems to be to obtain a lamp which shall constitute an efficient safeguard to the flame and yet give a good light. Many devices, it is said, have been tried, and it is admitted on all hands that the light afforded is miserable, scarcely more than is sufficient to make darkness visible. We should have thought there was little difficulty in constructing an electric lamp which should have an accumulator at the base and a glass cover to the light which would be strong enough to bear the rough usage to which such lamps are necessarily subject. The small coal might be used to drive an engine by means of which the accumulators could be charged, and if enough could not be stored in this way to last for several hours, wires might be carried to a central point of the workings, whence, when exhausted, a fresh supply could be procured. The problem of a good and safe light ought not to be insoluble.

"POSTHUMOUS LABOUR."

A CORRESPONDENT writes:—"At Moglia, in the province of Mantua, occurred a case of post-mortem delivery in some respects unique. A woman, Lavinia Merli by name, subject to chronic epilepsy, had suddenly lapsed into the cataleptic state when in the eighth month of pregnancy. So death-like was the trance that she was certified as dead and ordered to be buried. The coffin containing the unfortunate woman was closed and deposited in the mortuary chapel pending the gravedigger's work, when next morning it was found with the lid raised. The woman's body—now a corpse—was horribly contracted, and, closely pressed between the knees, lay a new-born child, quite dead. The gravedigger and his men, for reasons of their own, kept their discovery a secret and buried the two corpses. The facts, however, leaked out, and the judicial authorities, aided by physicians from Mantua, at once proceeded to exhume the coffin and examine its contents. A very minute and prolonged inspection was made, with the result that the physicians declared themselves satisfied that the mother was already dead when the child was expelled from the womb. From the position of the bodies and the commencing decomposition in which they were found, taken in connexion with other considerations set out at length in the official report, the conclusion was arrived at that the gases, disengaged by the putrefactive process, and seeking an exit, had forced out the fœtus; that, in short, the case was one undoubtedly very rare, but by no means unpre

cedented, in obstetric experience of "posthumous labour." The incident, however, has attracted notice beyond the Mantuan province, and medico-legal discussion on its details is yet far from being exhausted. It is asked, not unnaturally, if the woman Merli had really ceased to live, how the coffin lid came to be even partially raised? She is not by any means the only patient, in catalepsy or "nona," who in quite recent Italian experience has been certified as dead and treated accordingly; and the anti-cremationists, making the most of such cases, are warning the public how still more slender, in "apparent death," would be the chances of escape for Merli and her like, if, instead of the coffin, she had been consigned to the crematorium.

THE FIRST ABDOMINAL NEPHRECTOMY IN CUBA.

THE *Revista de Ciencias Médicas* publishes an account of the first operation for the extirpation of a kidney which has been performed in Cuba. The operator was Dr. E. Menocal of Havana, and the patient a young married lady who had had one child. She suffered from a tumour the size of the fœtal head, occupying the right hypochondriac and lumbar regions. In the lower part of it fluctuation could be made out. There was pus in the urine, and all the physical signs pointed to the existence of a diseased kidney. This it was decided to remove by means of an incision along the outer border of the external rectus, cutting through the peritoneum twice. There were adhesions between the diseased kidney and the peritoneum, and in separating them an abscess was opened which gave vent to a quantity of very fetid pus. The opening, however, was closed by means of bulldog forceps, and no further difficulty was met with. The pedicle and the ureter were ligatured with silk soaked in perchloride of mercury. The cavity was washed out with hot sterilised water. A silk suture in the form of a crown was applied between the edges of the posterior and anterior layers of the peritoneum, and two large drainage-tubes inserted, going to the bottom of the cavity, which was completely separated from the rest of the abdominal peritoneum. The external wound was sutured both deeply and superficially by metallic sutures, and an iodoform dressing put on. The bladder was washed out with a boracic acid solution. The whole operation occupied only twenty minutes. No serious complications occurred, and the wound was completely healed and the patient well in forty-six days. On examination, the tumour, which weighed about seven ounces, was found to contain eight abscesses, the cause of which was the blocking up of the ureter by an oxalate of lime calculus situated in the pelvis, and weighing twenty-four grains.

THE LAW AS TO FEES UNDER THE NOTIFICATION ACT.

IT has been a question under the Notification Act whether every practitioner who is called to a case requiring notification is entitled to the fee for notifying, or only the medical man who first sees and notifies the case. Such a question arose in connexion with a case seen for Mr. W. H. Kesteven by Dr. Watson. Dr. Watson notified and charged. Mr. Kesteven, acting as he thought under the requirements of the law, also notified and also charged. The vestry of Islington courteously declined to pay his fee. Mr. Kesteven entered into a long correspondence with them and with the sanitary committee on the point. He firmly maintained his claim, and told the vestry that he was confirmed in his view by THE LANCET and other medical authorities. The correspondence extended from January to May, and would have exhausted the patience of a man less clear-headed and tenacious of his rights. The vestry, fortified by their solicitor's opinion, adhered to the view that when more than one certificate is received notifying the same case of infectious disease, the first only can be paid for. Nothing daunted, Mr. Kesteven appealed to the Local Government Board, and, after waiting a month, wrote again. The Board replied that they were in correspondence with the vestry. On July 9th he received a note from Mr. Provis, the assistant-secretary of the Local Government Board, enclosing a copy of the following letter to the Islington vestry:—

[COPY.]

Local Government Board, Whitehall, S.W., July 9th, 1890.

SIR,—I am directed by the Local Government Board to acknowledge the receipt of your letter of the 27th ult., with reference to a certain certificate under the Infectious Diseases (Notification) Act, which was forwarded to the vestry of the parish of St. Mary, Islington, by Mr. W. H. Kesteven, of 23, Finsbury-circus, E.C.

With reference to the last paragraph of your letter, the Board desire me to point out that Sec. 3 (1.) (b.) of the Act requires that "every medical practitioner attending on or called on to visit the patient shall forthwith, on becoming aware that the patient is suffering from an infectious disease to which this Act applies, send to the medical officer of health for the district a certificate" stating certain particulars of the case; and I am to inform you that the Board are advised that if more than one medical practitioner is attending on or called in to visit the patient, each practitioner is bound to send a certificate, and is entitled to the prescribed fee.

I am, &c.,
(Signed) S. B. PROVIS,
Assistant Secretary.

To W. F. Dewey, Esq., Vestry Clerk, Vestry Hall, Upper-street, Islington, N.

Mr. Kesteven deserves the thanks of the profession for so stoutly vindicating its rights. The decision of the Local Government Board accords with common sense as well as with law. It is evident that the framers of the Act, if they did not draw their clause carelessly, meant to secure notification, even complete and confirmed, by exacting under it notification from every medical practitioner attending on or called in to visit the patient. Such exactions imply corresponding debts on the part of the sanitary authority, and we are glad that the point has been discussed so ably and settled so authoritatively.

ACUTE TUBERCLE OF JOINTS.

MILIARY tubercle of the synovial membrane of joints is of fairly common occurrence, but as a solitary affection is very rare. In the *Centralblatt für Chirurgie*, No. 22 (abstract), Chamarro describes this condition under the term "acute tubercular hydrarthrosis." He defines it as an eruption of miliary tubercles, accompanied by a copious serous effusion, in the synovial membrane of a joint hitherto healthy, but in a tubercular subject. This complaint was first described by Laveran in 1876, but has not been generally recognised. König, however, and some other writers, have described a similar affection in the course of acute pulmonary or general tuberculosis, in which the synovial membrane of one or more joints is attacked, causing considerable serous effusion, and in which after death well-marked miliary tubercles are found in the membrane, but inflammatory tissue changes are absent or only very slight. Chamarro has collected nine cases of the complaint he describes, and forms his conclusions upon them. The symptoms and course are generally as follows: The patient is always the subject of tuberculosis, although this may be obscure, being occasionally situated in the urinary tract, as in a case described by Mr. H. Alexis Thomson in the laboratory reports issued by the Royal College of Physicians of Edinburgh. A joint, generally the knee (very rarely more than one joint), which has hitherto been healthy becomes swollen without any apparent cause. The swelling appears very quickly, rising within a few hours, very often in the course of a night. There is generally a considerable amount of pain, especially if the effusion be considerable. The signs of fluid are well marked, and there is often an œdematous condition of the cutaneous coverings. Pressure on the capsule of the joint causes great pain, but none is produced by pressing the articular surfaces together,

thus distinguishing it from a tubercular affection of the bones. Absorption of the fluid occurs in from ten to thirty days, and a complete cure may follow; usually, however, a permanent thickening remains, not to be distinguished from "white swelling," or "gelatinous" or "pulpy degeneration." In the cases described by Chamarro, two recovered and two lapsed into a chronic state; the life of one of these patients was saved by amputation through the thigh, the other eventually died. The remaining five patients died, shortly after the acute joint affection set in, of tuberculosis of the lungs or meningitis. In all these five cases at the necropsies there was pronounced miliary tuberculosis of the synovial membrane of the joint affected; but there were no, or very slight, inflammatory changes in the subsynovial tissues, and the cartilages and bones were entirely unaffected. Giant cells were never found. The recognition of this condition Chamarro rightly thinks is of great importance, for such swelling may be diagnosed as gonorrhœal or due to acute rheumatism; the discovery of a tubercular affection in the lungs or elsewhere would correct this error. The thickening of the capsule occurs early, and must be carefully watched for. The pain is not usually so great as in other joint affections. As regards the treatment, Chamarro recommends rest, leeches to the affected joint, and painting with iodine, and blisters. He suggests that the capsule might be punctured and the joint washed out with antiseptic fluids.

CHELSEA PHYSIC GARDEN.

THE proposed sale of the Physic Garden on the Chelsea Embankment by the Apothecaries' Company, however profitable to its present owners, must, if carried out, be regarded as a public loss. It may be that the Company no longer see their way to preserving it as provided by the will of Sir Hans Sloane, its founder in 1721, for instruction in botany, but this need not imply its summary disposal to any purchaser. As a garden, it might still be utilised, as has been proposed, by one of the polytechnics or other educational bodies within the metropolis. The provision already made for such teaching as it affords is by no means excessive, and the project suggested is therefore not unworthy of consideration. At all events, we should be sorry to find its other important function, that of a city breathing space, overlooked. This happily is not the case, and Lord Meath, as representing the Public Gardens' Association, presided at a meeting convened in the Town Hall, King's-road, Chelsea, on the 16th inst., to take steps if necessary to secure the space in question for public use. In an atmosphere like that of London, already charged with a variety of gaseous and suspended impurities, every open area of the kind redeemed from the hammer is a definite gain on the side of healthy existence. We therefore wish Lord Meath and his helpers all success in their commendable endeavour.

BLEACHING TEETH.

A DIRTY-LOOKING blue tinged tooth in the front of the mouth is so disfiguring to the appearance that the subject seeks the aid of the dental surgeon. Such teeth are too often recklessly and ruthlessly excised, and an artificial crown attached to the root. The result is brilliant as far as appearance is concerned, and does not call for any great amount of labour on the part of the operator, but, at the same time, it is a question whether the true conservative treatment would not rather be to render the tooth presentable by bleaching and subsequent filling, which is practicable in a large number of cases. The most common cause of staining is the death of the pulp and the infiltration of the dentinal tubules with the products of its decomposition. Another cause, which is much more common than it should be, is the insertion of amalgam stoppings, especially those containing copper, and this stain unfortunately appears to be indelible. Two general classes of substances have been introduced for bleaching teeth—oxidising agents, such as chlorine compounds and peroxide of hydrogen, and reducing agents, as sulphurous acid. The treatment by means of peroxide of hydrogen is extremely simple, and gives good results; but it appears from recent experiments by Dr. Miller of Berlin that this preparation acts upon the dentine, removing the organic matter. Sulphurous acid is also open to a similar objection, in that its prolonged use will dissolve out the lime salts. Generally the chief chemical used for bleaching teeth is chlorine or some of its compounds. Where chlorine is used steel instruments are inadmissible, as the salts of iron which would be formed would rapidly discolour the teeth. The instruments must be constructed of gold, platinum, or ivory. In order to prevent the chlorine from passing through the foramen at the end of the root, which would probably cause acute periostitis, the apical third of the pulp canal is solidly filled with gold. The tooth is isolated at the gums, the soft parts being protected by the adjustment of the rubber dam, and the tooth thoroughly dried by means of a warm air syringe. The pulp cavity is then washed thoroughly with ether to remove any fatty material. Various preparations of chlorine have been recommended, but perhaps the simplest is freshly made chlorine water, as suggested by Dr. Wright, of Richmond, U.S.A., which is forced into the pulp chamber by means of a syringe. Three or four sittings of an hour each are usually sufficient to remove the discolouration, when the tooth can be filled in the ordinary way.

THE MORPHOLOGY OF HUMAN MILK.

DR. IVANOFF has published in the form of a graduation thesis in the Military Medical Academy of St. Petersburg an elaborate research on the subject of the morphology of human milk and its capacity for the nourishment of the child. The materials for the investigation were obtained in various lying-in, foundling, and other institutions. The conclusions to which his investigations led him may be stated as follows. The colostrum corpuscles are epithelial in character; they are more rapidly transformed into milk in the case of multiparæ than in primiparæ; the time at which they cease depends on the number of labours the woman has had, the more numerous these have been the sooner do they cease; bad general health and puerperal affections have also a considerable effect in retarding their disappearance. At the commencement of involution in the gland after the tenth month of lactation they reappeared in half the subjects examined. At certain stages minute hyaline masses exist as normal constituents of milk, some of them being free, others connected with fat globules. As a rule, the number of fat globules is found to stand in a direct relation to their size. Healthy, young, and well-nourished wet nurses give milk containing the largest number of fat globules, these having a large mean size; the same, only in a less degree, is true of the cellular elements. The later portions drawn by the child are poorer in fat globules than the earlier portions, and the globules themselves are smaller. The best guide we have as to the nutritive value of milk is the number of the fat globules; other though somewhat less important signs are the size of the globules, the number of the cellular elements, and, lastly, the number of granules. When milk contains the largest number of fat globules it is less well borne by very young infants than that with a medium number. A large size of the fat globules lowers the nutritive value, especially when there is a large quantity of fat, because it is not well borne. The daily increase in the

child's weight generally is at its maximum, which in these observations was twenty-seven grammes, when the milk has a medium number of fat globules of medium size. Milk with a small number of fat globules of small size produces a smaller daily increase of body weight than milk with a specially large number of large-sized globules, the mean daily increase in the two classes in the observations made by Dr. Ivanoff being sixteen and nineteen grammes respectively. Where the wet nurse was a sickly young woman the daily increase in the infants was very small—4·5 grammes, and they frequently suffered from gastric disturbance. From the data above given, it would appear that the microscope may afford considerable assistance in determining the value and suitability of a wet nurse's milk. Dr. Ivanoff gives a number of illustrations drawn by himself of the various bodies found in milk, the most striking ones being of a giant colostrum cell measuring 144 millimetres, and of some amœboid changes occurring in these bodies. He also gives four pages of references to the literature of the subject, in which Dr. Truman's interesting medico-legal case[1] and Dr. Ogle's Milk and the Microscope[2] are duly mentioned.

THE SURGICAL TREATMENT OF PERITONITIS.

DR. G. FRANK LYDSTON of Chicago, in a paper read before the recent meeting of the American Medical Association at Nashville, raised a plea for early operative interference in cases of peritonitis, and referred especially to the so-called "idiopathic" peritonitis of children (*Journ. Amer. Med. Assoc.*, June 28th). He denies that the affection is ever truly idiopathic, pointing out that in children the peritoneum is very readily injured, and that in them also slight injuries of the abdomen are more dangerous than in the adult. Many cases apparently idiopathic are also secondary to perityphlitis, which is comparatively common and often overlooked. He attributes the profound prostration and cardiac inhibition characteristic of peritonitis to (1) tension of the peritoneum produced by inflammatory products, with consequent reflex inhibition of the heart; and (2) mechanical interference with the heart's action. He maintains that there is no logical objection to surgical interference, the operation being almost invariably palliative, if not curative—enhancing the chances of recovery to a great degree. No case, unless *in articulo mortis*, should, he says, be allowed to die without such intervention. The incision need not be a large one, and except where perityphlitis is diagnosed (when it is best made along the line of incision for ligature of the common iliac), a median incision, with flushing of the abdominal cavity, is sufficient. He disclaims any intention of discouraging the use of opium, and states that his remarks apply especially to fulminant attacks, and these, although less acute, resist ordinary measures of treatment.

THE KASHMIR MISSION HOSPITAL.

IN the report for the past year the continued good and successful work of the little hospital in Srinagar, which is worked by Mr. A. Neve and Dr. E. Neve, medical missionaries of the Church Missionary Society, is chronicled. The total number of operations performed was 2558, with only six deaths. Over 1000 of these operations were for eye diseases. Fifty-nine cataract extractions were performed, 85 per cent. being successful and 8 per cent. partially so. Entropion and trichiasis are very common, 672 cases having been operated on, mostly by Stellwag's operation, and all with success. Goitre is sometimes seen; seven of these cases were operated on by ligature of the superior thyroid artery, the results being entirely successful in all but one instance, in which success was partial only. Another case was treated with partial success by ligature of the isthmus. The peculiar form of epithelioma on the abdomen and thighs, which is provoked by the Kashmir habit of carrying a kind of primitive stove about inside the clothes, furnished forty-three operation cases. One ovariotomy was performed with good result. Stone is far less common there than in many parts of India. Thirteen operations are reported. Nerve stretching for leprosy was undertaken in fourteen cases, in all but one with some measure of success. It may be interesting to economists to learn that all this, together with the supplying over 30,000 meals to patients, and the provision for 30,000 visits from out-patients, the keeping-up of the hospital with the native assistants—everything, in fact, except the maintenance of the two English medical men,—cost only about £600. A new "Downes" ward, named after the predecessor of Dr. Neve, has been opened, and some of the older part of the building, which was never very substantial, is to be rebuilt if funds can be raised. It is hoped shortly to be able to build a leper hospital, as there are a good many lepers in the valley, eighty new cases being reported this year.

FRANCE AND FOREIGN MEDICAL MEN.

IF the committee on the Medical Profession Bill in France is to have its way, foreign diplomas, of whatever country, are likely to be met with slight respect. The committee proposes that no medical man holding a foreign diploma shall be allowed to practise in France unless he has received the degree of Doctor of Medicine from a French faculty, after having passed the required examinations. In certain cases, however, the Minister of Public Instruction may grant an exemption from some of the examinations. Foreign medical students are to be subjected to the same rules as French students. No person is to be allowed to practise as a dentist unless he has a diploma of doctor, or has obtained a special diploma as dentist, issued by the Government, after examination and a preliminary course of study. Such suggestions give a poor opinion of the progress of truly liberal feeling in France. As they affect England we can only regret them, and hope that they will still not become law. The numerous people of British nationality in France, and the state of our medical education, tend to stamp such proposals as alike harsh and unreasonable.

CURETTAGE OF SOFT CHANCRES.

DR. O. PETERSEN, in a paper read before the Syphilodermatological Society of St. Petersburg, and which is published in the *Monatsheft für practische Dermatologie*, gives some interesting statistics from the wards of the Alexander Hospital concerning soft chancre. The total number of these cases treated as in-patients during the seven years 1881–1887 was about 3000, and the mean number of days they remained in hospital was 27·5. In 1888 the number of in-patients was less than half what it had been in any previous year, and the mean number of days they were kept in was only 20·7. The explanation of this difference is that during 1888 the treatment systematically pursued was that of scraping out the chancre with a small sharp spoon, just in the way in which lupus is treated. This plan was found to answer so well that a much larger proportion of the cases could be treated as out-patients than under other methods of treatment, besides which the severer cases which had to be admitted into the wards recovered in considerably less time. An objection to the operation is its painful character; but, according to Dr. Petersen, it is not much more painful than the application of caustics; besides, by a subcutaneous injection of cocaine ten minutes previously the pain can be avoided. Any ordinary anti-

[1] Vide THE LANCET, vol. ii. 1888, p. 413. [2] Ibid., 1873.

septic dressing suffices. The time usually required under ordinary methods of treatment for a soft chancre to heal is in uncomplicated cases from twenty to twenty-five days. The average time in 300 cases of all degrees treated by scraping out was just under ten days; in 26 of them recovery was complete in three days, and in 20 in five days. Only in exceptional instances, generally where the patients were anæmic and addicted to drink, was cicatrisation delayed for more than three weeks. Dr. Petersen has made a number of bacteriological investigations, and has found Ferrari's bacilli, as a rule, in the secretion from the soft sores, so that he is quite disposed to believe in the importance of a microbicidal method of treatment.

"SILVER DEW."

THE lowness of the temperature and the saturated condition of the atmosphere during the first fortnight of July have been productive of what is popularly known among country folk as "silver dew," which consists of rapidly condensed aqueous vapour deposited by early morning on the green sward and surface of the ground generally. Those of our readers who are unable to see this in nature may form some idea of it by inspecting Sir John Millais's exquisite picture of "Dew-drenched Furze," No. 119, in the New Gallery. The gossamers stretching from prickle to prickle of gorse in autumn form exquisite atmospheric filters, separating the aqueous vapour, and holding it in suspension as "silver dew." Sir John Millais has almost surpassed himself in the delicate delineation of this aspect of nature. That some of the features of autumn should be represented at midsummer cannot be a matter of wonder when it is remembered that the early morning temperature fell as low, on Friday (11th), as only one degree above freezing point, and morning after morning was within ten or twelve degrees of the same point. When the early morning temperature of July is compared with that of January, it will be seen that there was very little difference between the two, as shown in the following statement, by Mr. B. D. Knox, published in the columns of a contemporary:—

JANUARY.	JULY.
At 9 A.M. on the 6th the thermometers here registered 50°, with a minimum (night) temperature of 47°, and on the 23rd recorded 53° (day) and 51° (night) temperatures respectively.	At 9 A.M. on the 5th the same instruments registered 50°, with a minimum (night) temperature of 48°, and to-day recorded 56° (day) and 48° (night) temperatures respectively.

Delicate persons, convalescents from weakening diseases, the rheumatic, and the aged can scarcely hope for improvement under such conditions of atmosphere. Nor can our food crops be expected to flourish. It is therefore much to be hoped that the slight change in the weather for the better may continue, and make up in sunshine and a lessened rainfall for the deficiencies of the past season.

BROMOFORM IN WHOOPING-COUGH.

DR. HUGO LÖWENTHAL, of Professor Senator's Clinic in Berlin, has tried bromoform in the treatment of whooping-cough, it having been recommended by Dr. Stepp of Nürnberg, and he is disposed to agree with him in considering it a very valuable remedy. Dr. Löwenthal says that it exerts an almost specific action upon whooping-cough, at all events, if it is used at the commencement. A hundred children were treated with it varying in age from eight weeks to seven years. The doses given were from two to five drops three or four times a day. The liquid was simply dropped into a teaspoonful of water, and formed a bead floating in the water. The quantity dispensed at once was about a drachm. The parents were cautioned to keep the bromoform from the light, as otherwise it is liable to be decomposed. As a rule the good effects of the medicine began to show themselves on the second or third day, the vomiting being arrested within a week after the commencement of the bromoform. In cases where complications, such as pneumonia, occurred they ran a favourable course, and where there were relapses a return to the bromoform soon arrested the symptoms. In a very few cases the drug appeared to produce sleepiness and lassitude, and in one case, that of a weakly child a little over a year old, where a drachm had been given in the course of three days, a semi-comatose condition was induced. Subcutaneous injections of ether revived the child, who was found to have pneumonia. This, however, ran a rapid and favourable course, and afterwards the whooping-cough was successfully treated by renewed doses of bromoform.

LIBERALITY OF A CONTINENTAL SURGEON.

EXAMPLES of liberality in medical men are never very far to seek, though it is of course but rarely that members of our profession are sufficiently wealthy to make gifts of large sums for the public good. An excellent example of what some of the more fortunate of our continental brethren are able at times to do in this respect has recently occurred. Professor Sklifasovski, the eminent Moscow surgeon, having performed two operations on wealthy patients in Odessa, received from one of them about 200 guineas, and from the other a still more substantial fee, amounting to more than £1200. The University of Odessa has not possessed a complete medical faculty, but this is now being created, and Professor Sklifasovski has presented the whole of the larger fee to the new faculty, for the purpose of endowing a scholarship for poor students.

QUEEN'S NURSES.

THE prospectus has been issued of the Philanthropic Nursing Institute which has been founded upon a proportion of the fund subscribed in the Jubilee Year by the women of England as a testimonial to the Queen. The work which the institute is to undertake is that of providing home nursing for the sick poor, and the scheme which the provisional committee have elaborated is described as having for its objects the training of nurses in the special practice of nursing the sick poor by visits at their own homes; the foundation of local institutions for carrying on the work of district nursing and the maintaining of such local institutions in a high state of efficiency. The nurses who undertake this work are to be known as "Queen's nurses," and their qualification will include training at some general hospital or infirmary for not less than a year, approved training in district nursing for six months, and in country districts a three months' course of midwifery. It will thus be seen that the committee intend to provide for this purpose a highly qualified staff, and their determination will certainly command very general approbation. It is the besetting sin of philanthropists that they are given to undertaking tasks for which their only qualification is a good intention. The present is eminently a case which calls for high qualities both of mind and heart. The presence in a poor home of a stranger at a time of sickness may be either an inestimable boon or an insufferable burden, according as the stranger can or cannot adapt herself to the exigencies of the position and discharge the duties falling to her lot. To furnish untrained or untried women for such an office would be a mere mockery of those whom it is proposed to aid. The difficulty of finding a sufficient supply of persons good enough to undertake and capable enough to discharge these delicate and arduous duties will doubtless be the most

serious difficulty with which the directors of the movement will have to grapple. We have faith enough in our countrywomen to believe that no appeal to their sympathies can fail of a generous response, and that if anywhere the tact and skill are to be found which the duties of a Queen's nurse will demand the combination may be found among their ranks. But at the same time, we recognise that to persevere and to succeed in such an office will tax the highest qualities of the very best of women. The Institute will, however, start with great advantages, both material and indirect, and if well administered it ought to succeed in calling forth an abundant supply of latent talent. It may be hoped that all ranks of society will contribute recruits to the new organisation, and that by its means wealth, skill, and tenderness may be combined in the service of the sick poor.

TREATMENT OF DIABETIC COMA.

DR. A. P. CHADBOURNE records (*Boston Medical and Surgical Journal*, No. 26) a case of diabetic coma under the care of Dr. Shattuck, at the Massachusetts General Hospital, in which the treatment by intravenous injection of saline solution was practised. The patient was twenty-one years of age, and his urine contained 3·5 per cent. of sugar, a trace of albumen, and gave the "acetone" reaction. Coma supervened the day after his admission, and rapidly deepened, the respiration becoming slow and stertorous, and the pulse rapid (160). The left median cephalic vein was opened and thirty ounces of a 5 per cent. aqueous solution of sodium bicarbonate allowed to flow in. The pulse improved—fell to 120—and the patient returned to consciousness, becoming quite rational. Next day, after a period of restlessness and delirium, he again became comatose, and the injection was repeated with similar effect—which, however, was again but temporary,—and on the return of the coma (which speedily proved fatal) the friends refused to have the injection tried a third time. Dr. Chadbourne gives abstracts of seventeen published cases of diabetic coma thus treated, and remarks that of these only one was completely successful (a case by Minkowski cited in an article by Stadelmann, *Deutsch. Med. Woch.*, 1889, No. 46), but in many others there was a certain degree of temporary improvement. He infers that in at least eight of fifteen cases the records of which are comparable, "there was a gain that ought to be of great value to both patient and friends"; but of the remaining seven cases, "three showed absolutely no improvement." He points out that in one of the most favourable cases only water was used; and that the chances of good results are greater if the operation is done as soon as the first signs of coma have been recognised.

LONDON WATER-SUPPLY.

THE probability that the London County Council will acquire the undertakings of the water companies is increased by the reply which Mr. Ritchie made to a deputation of London members of Parliament, and of delegates from the majority of the vestries and district boards of the metropolis. The deputation expressed the hope that there would be legislation on this subject during the present session, but Mr. Ritchie at once pointed out that this was altogether impossible; he went on, however, to state his opinion as to the transference which was sought, and said that the views which the Government held in 1879 and 1880 had not been changed, and that the present Government was satisfied of the desirability of transferring the water undertakings to a public authority, and this authority, he thought, should be the London County Council. He referred to the inquiry which the Corporation of the City was now making at its own expense, and to the fact that the London County Council had this year received the sanction of the House of Commons to the expenditure of a sum of money on an investigation into the question of the water-supply. In regard to the effects of the present quinquennial assessment, he doubted if it would be found to benefit the water companies, but he considered that as a much smaller matter than the transference of the undertakings to some representative body. It may be expected that the action of the County Council and the Corporation of the City will lead to the introduction by the Government of a Bill into Parliament next session, although Mr. Ritchie did not definitely promise that this would be done.

SECRETION OF BLOOD INSTEAD OF MILK.

DR. HABERGRITZ of Witebsk, Russia, reports in the *Allgemeine Medicinische Central Zeitung* a case of the secretion of blood in the breasts. The patient was a young married woman who, when she had been pregnant with her first child about six months, consulted Dr. Habergritz as to whether the fœtus was alive. He noticed some blood stains on her linen in the neighbourhood of the breasts, and on examination found that drops of pure blood could be expressed. The patient said that the bleeding had begun when she was five months pregnant, and she did not know that it was an unusual occurrence, and therefore had not mentioned it. During the rest of the pregnancy the phenomenon continued, and the patient suffered besides from two or three attacks of epistaxis. Two days before labour came on the bleeding ceased, but it reappeared in increased amount the day after. The patient was very anxious to nurse the child, but as it drew nothing but blood this had to be put a stop to. On the seventh day the colour of the secretion began to change, and by the eighth it had all the characters of ordinary colostrum. The child was then allowed to take the breast, and nothing further abnormal was observed. It should be mentioned that the woman was perfectly healthy; there were no traces of gout, hæmorrhoids, cancer, or of hæmorrhagic diathesis.

CHANGES IN THE FALLOPIAN TUBES IN OVARIAN DISEASE.

DR. I. S. FEDORENKO, having been afforded opportunities of examining a number of specimens, both preserved and in the fresh state, of Fallopian tubes in cases of cystic disease of the ovaries by Professors Chiari and Rein, has published an instructive paper in the *Vrach* on the changes induced in the tubes in such cases. He remarks upon the length to which the tubes are sometimes stretched—frequently to 40 centimetres, and in one case, reported by Professor Breisky, to as much as 58 centimetres, the normal length being, according to Scanzoni, from 25 to 35 centimetres. The increase in the diameter of the tube, which is usually found where there is cystic disease of the ovary, is mainly due, he finds, to a hyperplasia of the muscular coat. The mucous membrane and epithelium, however, also take part in the process, the cells of the latter sometimes swelling to the size of 0·05 millimetre. The connective tissue layer does not appear to be increased at all constantly. In a few cases the tubes diminish in thickness, the muscular layer thinning and disappearing, its place being taken by connective tissue. In the cases where this atrophy has occurred the explanation appears to be that the tube has been subjected to compression, perhaps by the tube being included in the cyst wall instead of passing over it as is usually the case. Not only are there signs of hypertrophy and hyperplasia, but also of inflammatory changes. Thus, in nearly all the specimens the mucous and muscular coats could be seen to be infiltrated by nume-

rous white corpuscles, in some cases separated from each other, in others grouped together, and this not only where the tube was closely connected with the tumour, but where it was quite free from any neoplastic growth. Here it appeared that the stretching of the tube might be the cause of the inflammatory appearances. A careful microscopical examination was made to study the process of karyomitosis, from which it was concluded that this process was not a rapid one, the figures characteristic of indirect division being rare, and the advanced stages of division—wreaths, equatorial plates, and daughter asters—rarer still. A larger number of cells were met with in which the chromatin was increased, especially in the muscular layer. Side by side with the progressive changes signs of retrograde metamorphosis were found. Thus, in preparations with Flemming's solution some cells, both of the epithelial and of the muscular layers, were found filled with fat; while in others fat was seen around the poles of the nucleus, and in the connective tissue layer large globules of fat could be here and there distinguished.

THE INTERNATIONAL MEDICAL CONGRESS.

THE Italian physicians have responded with great cordiality to the invitation of their German brethren to assist at the International Congress which opens its sittings at Berlin on the 4th prox., and the committee of the Decimo Congresso Italiano di Medicina is now taking every step to aid its members in reaching that rendezvous. In a manifesto with which we have been favoured the Italian committee, amply acknowledging the debt which they and others of the profession in Italy owe to their German brethren, and inspired by the true "fratellanza" which knits together men of science in general and physicians in particular, call upon their medical compatriots to make their representation at Berlin as effective as possible, so as to bring back from the Congress the full benefit of the new light its transactions are expected to throw on the healing art in theory and practice for the furtherance of professional efficiency throughout the Peninsula. This is the true spirit in which such international congresses should be regarded, and the genial expression given to it in the manifesto before us is additional proof, if such were needed, of the noble estimate of their science and calling which characterises now, as of old, the votaries of medical study and practice in Italy.

HOW TO REACH AND ENJOY OLD AGE.

IT is no simple matter to state in terms at all precise what forces are directly connected with the production of hale and happy old age. More certainly is involved in the process than mere strength of constitution. Healthy surroundings, contentment, and active, temperate, and regular habits are most valuable aids. Hard work, so long at least as it is not carried beyond the limit necessary to permit of the timely repair of worn tissues, is not only a harmless, but a conducive circumstance. It is, in fact, by living as far as possible a life in accordance with natural law that we may expect to reap the appropriate result in its prolongation. Civilisation is at once helpful and injurious. Under its protecting influence normal development at all ages is allowed and fostered, while the facilities it affords for self-indulgence are constantly acting in an opposite direction. The case of Hugh Macleod, aged almost 107, which has lately been published, illustrates in a remarkable manner the truth of these observations. This man, a Ross-shire Highlander, in what must be the sombre twilight of a blameless and fairly active life spent in his native county, still shows, it is said, a notable degree of vigour. He takes a lively interest in the affairs of life, has good appetite, is generally healthy, cuts and carries his peat for household use, and goes about among his neighbours as of old. His food is of the plainest though nutritious—porridge, fish, a little meat; and his habit in this and other matters is not unworthy the attention of many who are daily hastening by opposite courses the end of a merrier, shorter, but perhaps not happier life.

SCARLET FEVER IN THE METROPOLIS.

THE fortnightly returns of the metropolitan asylums show a steady increase in the number of fever cases. The admissions have risen from 256 in the fortnight ending May 29th to 358 in that ending July 10th, and the increase has been almost entirely in scarlet fever. The number under treatment for this disease on the first of these dates was 1049, and on the second it was 1263. The increase, though shared by all the hospitals, has been much the greatest in the Eastern Hospital. The subject was brought under the notice of the Board of Managers of the Metropolitan Asylums at their meeting on Saturday last, when certain measures were authorised with a view to meet the contingency of a further spread of the disease. The Committee of the South-Western Hospitals were instructed to open, as soon as possible, the lower of the two hospitals at Stockwell, which has been for some time closed; the transfer of convalescents from enteric fever to the Northern Hospital was ordered to be discontinued for the present; and the Small-pox Hospital Committee were instructed to fit up and furnish the brick hospital at Darenth for the reception of convalescing fever patients, should the increase of cases in the other hospitals render such a step necessary or desirable. It is satisfactory to find the Asylums Board alive to the importance of being prepared beforehand for the not improbable event of an extension of the epidemic in the autumn.

TREATMENT OF TUBERCULAR JOINT DISEASE.

THE latest methods for the treatment of tubercle have mostly taken the form of injections of antiseptic fluids. This has especially been the case with regard to tubercular disease of joints. Two papers on this subject appear in the *Centralblatt für Chirurgie*, No. 25, by Bruns and Krause. These two observers speak in the highest terms of the success of this treatment. Bruns has treated fifty cases, in all of which there was more or less improvement. Krause gives the results of sixty cases, the disease being far advanced in them all; of this number, thirteen were perfectly cured, in so far that no fresh outbreak occurred after the lapse of a year. In the remaining cases improvement was manifested in nearly all; two died, one from advanced phthisis, and another from acute miliary tuberculosis. The best results were obtained when the knee was the joint attacked; good effects were also produced in aged patients in whom the wrist was diseased, and in which amputation through the forearm would have generally been performed. In cases of tubercular hip-joint disease ankylosis nearly always occurred; in two cases of severe coxitis, with numerous abscesses, erosion of cartilage, and displacement of the articular surfaces, most satisfactory results were obtained. This treatment is easy to carry out. The injections are best made with a strong exploring needle. The solution recommended by Bruns is one part of iodoform to ten or twenty of glycerine; that by Krause is a 10 per cent. emulsion of iodoform or glycerine, or a 10 per cent. mixture of water and iodoform. The injections should be made at intervals of two to four weeks, according to the severity of the case, and four injections will generally be found sufficient. After the withdrawal of the needle the aperture must be at once closed, and slight passive movement of the joint performed, so that the iodoform may be equally distributed throughout the cavity. Should

abscesses have formed around the joint the pus must be first evacuated by means of a trocar, and the abscess cavities washed out with boracic lotion, followed by the injection of 10 to 60 per cent. iodoform mixture. A considerable amount of contraction and hardening of the joint capsule occurs, and extensive scars form round the joint where abscesses have formerly been, so that there is often some difficulty in making the puncture for the later injections. The relief felt by the patient is immediate, and full movement is generally obtained after some months.

THE CENSUS BILL.

ALTHOUGH the middle of July has passed, the Bill authorising the Census which will be taken in April next has not yet been introduced. From the answer recently made by the First Lord of the Treasury to a question concerning the scope of this Census Bill, it is much to be feared that the Government intends practically to ignore the results of the inquiry held by the Departmental Committee appointed early this year to take evidence and report generally on the Census in its various aspects. If this should turn out to be the case, and that the recommendations of this committee have been disregarded, it may be hoped that independent effort will be made to secure some recognition of the urgent need for more frequent enumeration of the number, sex, and age of the population, which was pressed upon the committee by sanitary and other local authorities, and was embodied in the first recommendation of the committee's report. It is impossible to doubt that uncertainty as to the number of the population of sanitary districts five years after a Census enumeration largely discounts the value of rates of mortality as a means for stimulating public and local interest in sanitation. Under these circumstances there is too strong a tendency in the last half of a ten-year intercensal period to resist the evidence of high death-rates, and to await the next census before accepting them as evidence of insanitary condition. In order successfully to combat this sanitary stagnation, it has long been felt by those taking the deepest interest in health progress that it is urgently necessary to get power in the forthcoming Census Act to take an intermediate and comparatively simple enumeration of the people between the decennial censuses of 1891 and 1901. It will therefore be matter for serious regret if the advocates of this reform are doomed to disappointment, notwithstanding the conclusive evidence in its favour given by the witnesses examined before the Census Committee. It is not necessary to multiply examples of the difficulty in which sanitary authorities at the present time are placed by the impossibility of arriving at a trustworthy estimate of the population of their districts, inasmuch as the Registrar-General has long since ceased to make any estimates of the present population, or to publish death-rates of any but the largest towns and areas. It may be noted, however, as a solitary example of this difficulty that the population of the district of Whitechapel, which was 76,573 in 1871, had declined in 1881 to 71,363. Now, if this decline of population has continued since 1881, the present population of the district would be 66,446; but its medical officer of health states in his last annual report that he believes the population has increased since 1881 almost as much as it declined in the preceding ten years, and estimates the population in 1889 to have been 75,057. The report in question does not explain the principle upon which the medical officer of health estimates that the population of Whitechapel has increased by nearly five thousand persons since 1881, and it may be that he attaches too much importance to what is known as the natural increase, or excess of births over deaths in the district, apparently not giving due consideration to the fact that between 1871 and 1881, when the enumerated population declined more than 5000, the excess of births over deaths (after correction for deaths in the London Hospital) was more than 7000. We see no good ground for believing that the Whitechapel population has continued to decline since 1881 at the same rate that prevailed between 1871 and 1881; but at the same time there is little evidence of the assumed increase of population. When, however, it appears impossible satisfactorily to estimate the population of a sanitary district like Whitechapel within 5000 or 10,000 of its true number, it must be obvious that any calculated rate of mortality for the district must be divested of most of its value as an indication of sanitary condition. It is earnestly to be hoped that the Government will not in their Census Act lose sight of the two facts: (1) That no trustworthy death-rates can be continuously calculated for sanitary districts without more frequent counting of the population; and (2) that without trustworthy death-rates it is impossible to stimulate, or even to maintain, the rate of sanitary progress which has effected so much real improvement in public health in recent years.

CHOLERA INTELLIGENCE.

THE somewhat contradictory statements as to cholera in the province of Valencia, to which we referred last week, were suddenly followed by an ominous absence of all official returns of cholera mortality; and this in turn has been succeeded by a vague general statement to the effect that the disease is again spreading in the province, that fresh places are known to be infected, and that one cholera death has taken place in the city of Valencia. Gaudia is referred to as having suffered most, and it is stated that the existence of the disease was concealed at Castello de Rugat until the Government inspector found that within a fortnight there had been some fifty cases and seventeen deaths. This tendency to concealment is loyally carried out because of the severe restrictive measures which the Spanish Government apply in the direction of isolation and disinfection, and it is evident that, in so far as these are in excess of that which is really necessary for truly scientific purposes, such measures tend to defeat the very object which they profess to have in view. News as to cholera in Mesopotamia and in South-eastern Russia has come in very sparsely of late, but it is stated that cases of "cholerine" exist in various parts of Southern Russia, where the weather is abnormally hot; and news from Tiflis at the end of last week was to the effect that cholera was admittedly present in Turkestan, that there were persistent reports of its presence in the Volga provinces, and that a system of medical inspection has been organised in the Cis- and the Trans-Caspian ports.

EFFECT OF OPERATION WOUNDS ON THE HEART.

DR. J. TANSINI has made a number of experiments on animals with a view to determine the effect upon the heart's action of operation and other wounds of the skull, the pleura, and the abdomen. In operations on the skull he finds that the heart is less affected by the use of the trephine than by that of the chisel. The latter may, however, be employed with impunity even upon a skull that is still entire if an instrument of small size be used, and if it be inclined at an angle of 30° with the surface. When an opening has already been made into the cranial cavity, the use of the chisel appears to exert no disturbing action on the heart. A plug outside the dura mater is much more prejudicial than one applied directly to the brain substance. Venous hæmorrhage can always be arrested by the latter without any serious interference with the heart's action. Washing out the lateral ventricles produces but little effect on the heart if there is a free exit provided for the liquid. Ten experiments were made on the pleura, from which, it appears,

that an opening of either the right or the left thoracic cavity has a very serious effect on the heart, causing at first irregularity and subsequently diminution of the movements. Continued washing out of the cavity with cold water at 11°C., or even at the body temperature, slows the heart to a more marked degree, and causes the animal to die more rapidly. The various antiseptic solutions do not appear to behave differently from plain water, with the exception at least of those that are definitely poisonous. Wounds of the abdomen producing prolonged irritation of the abdominal nerves appear to slow, and ultimately to arrest, the heart's action.

INDUCED ELECTRICITY IN UTERINE HÆMORRHAGES.

DR. EUGEN BOÉR remarks in a Hungarian journal that though iodoform gauze plugs carefully applied will usually arrest the flow in menorrhagia, still cases occur in which this plan does not succeed, because probably the hæmorrhage is due to atony of the uterus. In one case of this kind, that of a girl of eighteen, having tried all the usual internal and local remedies, and the patient having become unconscious from loss of blood, he determined to try the faradaic current, which arrested the hæmorrhage in ten minutes; and, again, when, three days later, there was a slight return, the same method was resorted to with success. The effect was also of a permanent character, for though the faradaisation had to be resorted to at the next period, the subsequent one was normal. A similar treatment proved equally successful in the case of a multipara with profuse and intractable menorrhagia. At first Dr. Boér applies the negative electrode directly to the cervix, and after the arrest of the hæmorrhage to the perineum, the positive pole being applied with some little pressure to the abdomen over the fundus uteri.

INVALID CHILDREN'S AID SOCIETY.

THE charitable and useful efforts of the Invalid Children's Aid Association have already come under the notice of our readers (THE LANCET, Nov. 16th, 1889, p. 1022). They are further described in a short report just issued by the Society, and we cannot now better explain their purpose than, as it is therein stated to be, as an endeavour to bring to every sick and needy child in London the helping hand of a friend who can devote both time and care to the work of relief. There are at present 650 poor children on the books of the Association, and when we mention the fact that a large proportion of these (about two-thirds) suffer from disease of the hip or spine, it will be evident that the work undertaken on their behalf is no sinecure. Among the more pressing wants of the Society is that of voluntary district visitors who will severally undertake the kind supervision of at least one child. It is hoped, also, that a certain proportion of visiting nurses may be induced to render skilled assistance in suitable cases. In-patient letters for hospitals and for convalescent homes, surgical apparatus, books, &c., are also in daily request. Here we may notice the fact that much of the expense incurred by the Society is due to the maintenance in part of children in hospitals and homes. Part of this cost, it should be mentioned, is borne by the parents, and part also by such voluntary helpers as may be disposed to contribute towards this object. We are pleased to see that the practice of boarding out, which has wrought such excellent effects alike in the physical and moral condition of many destitute children, is included among the methods used by the Society. It will be evident even from this brief sketch that the work above described is a well-deserving one, and we may take its connexion with the Charity Organisation Society as a guarantee that the friendly charity which it offers will not be misapplied.

THE GASTRIC JUICE IN DIABETES.

IN a long article on the condition of the gastric juice, saliva, and perspiration in diabetes, Dr. Ponomaroff details a number of observations which lead him to dispute the assertions of some previous observers—e.g., Heller and Frick, who believed that they had detected sugar in these secretions. With regard to the gastric juice, Dr. Ponomaroff points out that where this is obtained by making the patients vomit, what is obtained is not the gastric juice alone, but an admixture of that with a certain quantity of bile. This generally contains sugar, and therefore vitiates the result. When the œsophageal tube is used and the gastric juice free from bile is obtained, there is, he states, never any sugar in it.

FOREIGN UNIVERSITY INTELLIGENCE.

Algiers.—Dr. Merz has been appointed Professor of Clinical Midwifery.

Caen.—Dr. Catois has been appointed Professor of Hygiene and Therapeutics.

Limoges.—M. Peyrusson has been appointed Professor of Chemistry and Toxicology.

Paris.—Dr. Lejars has been appointed Surgical *Chef de Clinique.*

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Friederich Arnold, the oldest German teacher of Anatomy and Physiology, at the age of seventy-seven, he having commenced to teach these subjects as assistant to Professor Tiedemann, and as long ago as 1834 having been promoted to an extraordinary professorship in Heidelberg. He was subsequently full professor in Zurich and in Frieburg, and was recalled to Heidelberg in 1840, where he taught until his retirement in 1876. Before this, however, his son Julius Arnold had been appointed to the chair of Pathological Anatomy, so that for some ten years father and son were co-professors.—Dr. A. Müller, Professor of Geology in Basle.—Dr. P. M. Pullo, medical inspector of the province of Samarski.

THE delegates of the London Medical Schools (other than those attached to King's and University Colleges) were on Tuesday last received by the Committee of the Senate of the University of London. We understand that special attention was drawn to the direct representation of the medical schools as constituent colleges, and to the necessity of the preliminary scientific examination being conducted by the University itself.

IT is reported that a large number of medical men resident in the Hague have addressed the municipal council of the Dutch capital, calling attention to the unsatisfactory condition of the waterworks of the city, and pointing out the danger to the citizens in the event of an epidemic arising.

THE Bradshaw Lecture will be delivered by Dr. Saundby at the Royal College of Physicians on Monday, Aug. 18th, at 4 P.M. The subject will be "The Morbid Anatomy of Diabetes Mellitus."

HER MAJESTY has conferred a Knight Commandership of the Bath on Sir John Kirk, M.D.Edin., G.C.M.G., &c.

SURGEON LE QUESNE, V.C., has been elected an Hon. Fellow of King's College.

HEALTH REPORT OF INDIA FOR 1888.

No. II.

THE strength of the native army of India in 1888 averaged 145,252 men, of whom 124,822 were present with their regiments and 20,430 were absent from various causes. The admissions into hospital of the former were 995, the deaths 12·84, and the proportion constantly sick 33·4 per 1000. The death-rate among those absent from their corps was 28·73 per 1000. If the two classes are combined, the proportion for the whole native army will be found to be 16·14 per 1000, or 1·33 per 1000 higher than the European army in India for the same year. Of 587 men who died when absent from their corps, 159 were on furlough and 428 on sick leave. The causes of death of these men are unfortunately not recorded in any of the tables.

Omitting the force in Upper Burmah for the first quarter of the year and the men absent from their corps on furlough and sick leave, the sickness and mortality were distributed among the various divisions of the Native army as follows:—

Ratio per 1000 of Average Strength.

	Average strength present.	Admissions.	Deaths.	Mean Sick.
Bengal Army	50,886	992	13·11	32·8
Madras ,, ...	25,671	886	15·31	36·5
Bombay ,, ...	23,570	1080	10·52	34·6
Punjab Frontier Force	12,426	1369	15·61	36·1
Central India Irregular Force	5,233	658	5·54	17·2
Hyderabad Contingent	6,242	734	6·73	27·1

Compared with the preceding year, there was a very marked increase in the death-rates of the Madras Army and the Punjab Frontier Force. In the former the excess occurred almost entirely in Upper Burmah, where the death-rate was as high as 49·58 per 1000, the chief causes being cholera, dysentery and diarrhœa, paroxysmal fevers, and anæmia and debility. In the Punjab Frontier Force respiratory diseases caused a mortality of 6·44 per 1000, cholera of 3·62, and paroxysmal fevers of 1·93. There was a marked reduction in the mortality of the Central India Irregular Force and the Hyderabad contingent, chiefly manifested in cholera.

Malarial fevers were assigned as the cause of 45 per cent. of the total admissions and 15 per cent. of the deaths of the native troops. Respiratory diseases gave rise to 2·68 and cholera to 2·14 deaths per 1000 of strength. The mortality by paroxysmal fevers was 1·91 per 1000; of enteric fever only 17 cases, with 7 deaths, were reported from the whole force. This does not appear to be a result of defective diagnosis, but an exemption of the native troops, compared with the European, from fatal forms of fever. In 1888 the ratio of deaths from fever of all types was 4·48 in the European force, and only 2·03 in the native; in the former it was the cause of 30 per cent., and in the latter of only 16 per cent. of the total deaths. The ratio of deaths from phthisis was only 0·66 per 1000 of strength; among the European troops it was only 0·64. Both classes, therefore, appear to enjoy a marked exemption from this formidable disease. It seems probable that the ratio for the native troops may be slightly understated owing to the causes of death of the men on sick furlough not being ascertained.

While the summary of the sanitary sheets gives evidence of considerable improvement at many of the stations, there are still frequent complaints of overcrowding, sometimes throughout the year, at others for varying periods, and also of insufficient and unsatisfactory ventilation. The drainage of many of the stations requires to be amended, and at some of them complaints have been made during the year of insufficient water-supply and, at a few, of its deleterious quality. These summaries show that considerable attention has been paid by the medical officers to the health surroundings of the native troops, and that some, though apparently not very rapid, progress is being made by the military authorities in carrying out the recommendations made to them on these subjects.

The average number of the gaol population of India was 91,445, among whom the admissions into hospital were 1129, the deaths 35·57, and the daily sick 37·7 per 1000. These figures are all higher than in 1887. There is an increase of 12,000 in the number of the prisoners, but this is stated to be in consequence "of a number of subgaols in every province, as well as those of Europeans and of some newly established gaols in Burmah" being included in the tables for the first time. The sickness, mortality, and mean daily sick were all considerably higher in Bengal than in the other two Presidencies, Bombay having the lowest ratios. The high death-rate in Bengal was in a great measure due to cholera in the gaols of Lower Bengal and Assam and in those of the Punjab, amounting in the former to 9·31 and in the latter to 5·00 per 1000 of the prisoners. In the Bengal Presidency the admissions averaged 1079, and the deaths 33·93 per 1000; in the Bombay Presidency, 647 and 22·24; in the Madras Presidency, 720 and 27·64; in Burmah, 1205 and 53·60; and in the Andamans and Nicobars 1797 and 40·99 per 1000. In all of them fevers were the most frequent cause of admission, and next to them dysentery and diarrhœa. In Bengal the most frequent causes of death were dysentery and diarrhœa, followed by respiratory diseases, cholera, and fevers; in Bombay, respiratory diseases, dysentery and diarrhœa, and cholera; in Madras, dysentery and diarrhœa, anæmia and debility, and respiratory diseases; and in Burmah, cholera, dysentery and diarrhœa, and respiratory diseases. In some of the gaols a very high rate of sickness and mortality was manifest. For instance, in Bengal, omitting all gaols with less than an average of 100 prisoners, the admissions in Amritsar were 3528, and the deaths 36·86 per 1000; in Etah they were 2324, and 27·78; and in Banda, 2302 and 101·64. In Rungpore the death-rate was 174·10; in Rajshahai, 133·59; in Ranchee, 162·65; in Gya, 113·76; and in Sambalpur, 103·63 per 1000. In only two of the larger gaols of Bombay was there a comparatively high rate of admissions; at Kurrachee it amounted to 1232, and at Thana to 1103 per 1000; and the highest death-rate was 42·91 at Thana; at Kurrachee it was only 22·58 per 1000. The highest ratio of admissions in Madras was 2112 at Rajamundry central gaol, and Cannanore was the only other gaol which exceeded 1000. But several of them had very high death-rates. Thus, in Coimbatore Central it was 107·14; in Parvatipur, 115·85; in Cannanore, 72·16; in Berhampore, 52·21; and in Trichinopoly Central, 40·10 per 1000. The admissions and deaths in Burmah ran high; at Mandalay the former were 2049; and at Pagan the latter were 269·23 per 1000, or upwards of one-fourth of the average number in gaol. Minbu, Toungoo, Myingyan, and Moulmein also furnished very high death-rates. In the Andamans and Nicobars the admissions were 1797 and the deaths 40·99 per 1000. In these remarks we have omitted reference to all gaols having less than 100 inmates. An examination of the summary of the sanitary sheets from the gaols shows that in most of those in which great sickness or mortality has been recorded the sanitary conditions of the gaol, its surroundings, its water-supply, and the drainage have not been satisfactory. There is abundant evidence that much requires to be done in many of them before they can be considered as likely not to prove injurious to the health of their inmates. It would be interesting to ascertain the relative health of the prisoners and of the staff in those prisons which furnish high rates of sickness and mortality.

A table is given in the report showing the relative mortality of the prisoners and of the troops, European and native. But there is one error in the comparison, arising from the omission of the deaths of men of the native army absent from their corps. Thus, it is stated that, "Taking the death-rate of native troops as unit, the death-rate of European troops will be represented by 1·2, and the death-rate of prisoners by 2·8." But if the calculation be made on the total death-rate of the native troops, the death-rate of the European troops would be represented by 0·92 instead of 1·2, and that of the prisoners by 2·2 instead of 2·8. This error to some extent vitiates the comparison of the relative mortality by different groups of diseases, but there are no means of making the necessary correction. Making allowance, however, for this, the tables give some interesting information. They show the chief causes of death among the prisoners to be bowel complaints, among the native troops respiratory disease, and among the European troops fevers. The latter enjoy an exemption from cholera, respiratory diseases, and bowel complaints compared with the native troops, who again have a very marked exemption compared with the prisoners. The very low death-rate from phthisis, which we have already noticed in the case of both European and native troops, does not extend to the prisoners, among whom it amounts to 2·59 per 1000.

The registration of deaths of the civil population of India is so very imperfect, and the results obtained so irregular,

that it is impossible to place much reliance on them. In a population stated at 197,202,012, 5,075,453 deaths were recorded, being in the ratio of 25·74 per 1000. The death-rate ranged between 30·08 in the N.W. Provinces and Oude, and 17·30 in Mysore. In all the divisions except Assam, Lower Burmah, and Bombay it was lower than in the preceding year. The increase in Bombay was trifling, but in Assam it amounted to 3·56 per 1000; it is impossible, however, to say how far this was due to an increase in the deaths, or to a more efficient working of the registration. The last quarter of the years appears to be much the most fatal; of every 100 deaths recorded 22·09 occurred in the first quarter, 22·96 in the second, 24·32 in the third, and 30·63 in the fourth. Of the causes of death, as registered, 3,371,487 were fevers, giving a ratio of 17·10 per 1000 of the population, and one-third of the total mortality. Cholera gave a death-rate of 1·36 per 1000; bowel complaints, 1·27; small pox, 0·47; injuries and accidents, 0·44; and all other causes of death, 5·10 per 1000. Under the head of injuries and accidents are included 24,348 deaths from snake-bite or of persons killed by wild beasts, being in the proportion of 12·35 in 100,000 of the population, and 10,276 by suicide, or 5·21 per 100,000. This is about 1·5 per 100,000 lower than in England, and is probably understated. The deaths from fevers ranged between 7·3 per 1000 in the Madras Presidency and 23·89 in the North-Western Provinces and Oude. In all the Provinces except Bengal, Assam, and Lower Burmah the ratio was lower than in 1887. Bowel complaints furnished the lowest ratio in Bengal and the highest in Assam, in the former being 0·78 and in the latter 3·25 per 1000 of the population. The report goes into considerable detail regarding the prevalence, as estimated by the death-rate, of cholera. It was less fatal than in the preceding year in all the provinces except Assam, Lower Burmah, Madras, Bombay, and the Punjab. Much the greatest increase was in Lower Burmah. The effect of the removal of troops and prisoners into camp when cholera broke out in the cantonments or gaols has been very satisfactory. In seven instances among European troops the disease at once ceased, and in five others it was quickly checked. In twenty moves of native troops fourteen were immediately freed of the disease, three had only one fresh case, and in the other three it very soon ceased. In the case of removal from gaols the results were not quite so satisfactory. Eleven out of seventeen movements were successful, but at Lahore, Chinawan, Rawal Pindi, Bassein, Moulmein, and Pagan a second or third move was found necessary.

An account is given of the military and civil sanitary works which have been undertaken or executed during the year. There appears to be a steady though not very rapid, progress in these works, especially as regards water-supply and drainage.

INTERNATIONAL MEDICAL CONGRESS.

THE Congress will be opened by a general meeting in the Circus Renz, Karlstrasse, at 11 A.M. on Monday, August 4th. The general meetings on Wednesday and Saturday will be held at the same place. The meeting rooms of all the sections will be located in the National Exhibition buildings in Alt Moabit Strasse.

The following is the programme:—

Saturday, August 2nd.—Opening of the Medico-Scientific Exhibition in the National Exhibition buildings, Alt Moabit Strasse.

Monday, August 4th.—11 A.M.: Opening of the Congress in the Circus Renz, Karlstrasse. 4 P.M.: Constitution of the sections in the sectional meeting rooms in the National Exhibition Park, Alt Moabit Strasse. 9 P.M.: Social reunion of members and ladies in the Exhibition Park.

Tuesday, August 5th.—8 A.M. to 5 P.M.: Sectional meetings. 8 P.M.: Reception of members in the Rathhaus by the Municipality of Berlin.

Wednesday, August 6th.—11 A.M.: General meeting, Circus Renz. 3 P.M. to 5 P.M.: Sectional meetings. 7 P.M.: Sectional dinners, to some of which ladies may be invited.

Thursday, August 7th.—8 A.M. to 5 P.M.: Sectional meetings. 9 P.M.: Ball.

Friday, August 8th.—8 A.M. to 5 P.M.: Sectional meetings. Afternoon: Court reception at the New Palace at Potsdam, by special invitation.

Saturday, August 9th.—8 A.M. to 11 A.M.: Sectional meetings. 12 noon: Final general meeting. 8 P.M.: Farewell dinner to members of the Congress, given by members of the profession in Berlin, in Krolls' Garden in the Königs-Platz.

Membership tickets authorise attendance at all scientific meetings, and to the Museum. For all other meetings special tickets must be obtained at the Central Bureau of the Congress. Lady relatives of members must send their visiting cards in making application.

After Aug. 4th the Central Bureau will be located in the Austellung's Park N.W., Alt Moabit. Until then letters for the general secretary, exhibition, and lodging's committees are to be sent to Karlstrasse 19, Berlin N.W.; for the treasurer, to Leipziger Strasse 75, Berlin S.W.

Telegrams and letters to members during the meeting of the Congress should be addressed—Berlin N.W., Alt Moabit, No. 4–10, Bureau des Congresses.

A committee, formed by the wives of Berlin medical men, will care for the convenience of all lady visitors. Members of the committee will wear a special badge.

The general addresses will be by—(1) Sir Joseph Lister, Bart., The Present Position of Antiseptic Surgery; (2) Dr. Robert Koch, Bacteriological Investigation; (3) M. Bouchard, The Mechanism of Infection and Immunity; (4) Dr. Axel Key, The Relation of the Development of Puberty to Diseases of School Life; (5) Dr. H. Wood, On Anæsthesia; (6) Signor Cantani, On Antipyresis; (7) Professor Meynert, The Coöperation of the Parts of the Brain; (8) Professor Stokvis, On Colonial Pathology.

The following English members will read papers &c.:—Sir W. Turner, Professor Cunningham, Professor Schäfer, Dr. Mott, Dr. F. Semon, Professor Horsley, Dr. Sherrington, Mr. Ballance, Sir H. Acland, Dr. Lauder Brunton, Professor Grainger Stewart, Dr. Herman Weber, Sir Andrew Clark, Dr. Pavy, Dr. Ord, Dr. Dreschfeld, Dr. P. Kidd, Professor Greenfield, Dr. A. S. Eccles, Dr. H. Ashby, Mr. Jonathan Hutchinson, Mr. Muirhead Little, Professor MacEwen, Dr. Galabin, Dr. J. Williams, Dr. Macan, Dr. Thos. Keith, Dr. Lloyd Roberts, Dr. More Madden, Mr. Stuart Nairne, Dr. Jas. Murphy, Professor Simpson, Dr. W. J. Sinclair, Dr. R. Bell, Dr. T. Buzzard, Dr. C. Beevor, Mr. H. W. Page, Dr. James Ross, Dr. W. A. Brailey, Dr. Grossmann, Mr. O. M. Berry, Dr. Jas. Stewart, Dr. D. Newman, Mr. Malcolm Morris, Dr. Colcott Fox, Dr. Brooke, Dr. Mapother, Dr. P. S. Abraham, Dr. Greene, Mr. Mummery, Mr. Hayman, Mr. G. Brunton, Mr. T. G. Read, Dr. A. W. W. Baker, Mr. G. Cunningham, Dr. Beaven Rake, Dr. Geo. Buchanan, Mr. Reginald Harrison, and others.

The general programme is now ready, and may be obtained on application to the general secretary, Berlin N.W., Karlstrasse 19.

MUSEUM OF THE COLLEGE OF SURGEONS.

THE usual exhibition of preparations that have been added to the museum of the Royal College of Surgeons during the year was held on the afternoon of the 3rd inst., during the time of the election of members of Council; want of space prevented us from referring to this collection last week. From the annual report of the Conservator, Professor Stewart, we learn that the additions to the museum, though perhaps less numerous, are quite as important as in previous years. The following may be mentioned as among the additions:—Sarcoma of the prostate gland, carcinoma of the apex of the bladder, squamous-celled carcinoma of the uterus, congenital hydronephrosis, cystic kidney.

Nos. 715, B to H, include specimens illustrating a peculiar and hitherto scarcely known disease of goats. The most striking feature of the disease is enlargement of the lower jaw, by which the mouth is kept open.

Among the more interesting additions, mention should, in the first place, be made of a series of Egyptian bones, which were collected in Lower Egypt by Mr. Flinders Petrie. They were obtained from a town called Gurob, and their date is approximately B.C. 1300. Many of them show changes produced by osteo-arthritis, a fact of interest, as it confirms the view of the antiquity of that disease,

and shows that the conditions of the people were those presumably least favourable to rheumatic and allied affections. The climate was warm and essentially dry; they lived almost exclusively on farinaceous and vegetable foods, and they are not known to have had any alcoholic beverages. Further, some of these bones (1186 B and C) show a superficial "frosting" or diffuse formation of subperiosteal bone, having an entirely different distribution to that observed in syphilis, and agreeing with the description of rheumatic periostitis given by some writers. The differences which this new bone presents to that produced by other well-known causes of periostitis, and the coexistence of osteo-arthritis of the articular ends, are the chief reasons for believing that the periostitis is a manifestation of the same morbid condition as the osteo-arthritis. One of the skulls (23 B)—that of an old person, and obtained from a mummy—is probably the most perfect existing example of the remarkable symmetrical atrophy of the parietal bones sometimes met with in senility. Another skull (23 C), also Egyptian, exhibits the same change in an early stage, and illustrates the fact that the disease begins by absorption of bone around the bloodvessels, and thus simulates osteo-porosis. Those interested in the repair of injuries in old age will find a united intra-capsular fracture of the neck of a femur from a woman aged ninety (992 A). The advances and achievements of modern surgery are illustrated by some specimens, notably by an enormous peri-renal sarcoma (No. 3597 B). A case (No. 1636 C) of myeloid sarcoma of the head of a humerus, in which the tumour was removed by excision, is also of interest. No recurrence of the disease had taken place a year after the operation. In the museum there is at present a myeloid sarcoma of the head of a tibia treated in the same manner (No. 1636 B). No. 3167 A is an aneurysm of the transverse portion of the arch of an aorta for which the left common carotid was ligatured. The operation was followed for a fortnight by improvement, but subsequently the tumour increased. The aneurysm is completely filled with clot, and this extends from its orifice, and almost blocks the aorta. No. 3261 A exhibits, probably, a unique condition—namely, a tumour of the popliteal space formed in part by an aneurysm filled with clot, in part by a sarcoma, which constitutes part of the wall of the sac. What sequence the two diseases bore to each other is unfortunately not clear. Some valuable additions have been made to the pathological anatomy of the genito-urinary organs. A group of specimens illustrating acute hæmorrhage from the Fallopian tube has been brought together, the interest of which lies in the fact that in three of them the history pointed to extra-uterine pregnancy, although in no one was an embryo found. As in the preceding two years, a descriptive catalogue of all the additions to the Pathological section has been compiled by Mr. Eve, and printed, and to this reference for further particulars may be made. In the Department of Comparative Anatomy, the most important additions consist of numerous examples of mimicry amongst lepidoptera from Africa, Indo-Malaya, and Tropical America. Of these many are remarkable for the very perfect superficial resemblance of the mimic to the specially protected species. Many valuable preparations have been made from two large specimens of varanus, and dissections of the limb-muscles of a fœtal elephant.

INSANITARY CONDITION OF HASLEMERE.

AT the Surrey County Council on Tuesday, sitting at Newington, a report was presented by Dr. Edward Seaton, who was appointed to inquire into the pollution of the river Wey, who further reported as under concerning the sanitary condition of Haslemere:—"Reports having appeared in THE LANCET of the insanitary condition of the village of Haslemere, I placed myself in communication with Mr. Napper, medical officer of health of the Hambledon Union, and in company with that gentleman inspected the village on Saturday, May 24th. Mr. Napper pointed out to me many nuisances and insanitary conditions that he had reported to his Board, but for the remedy of which no efficient measures appear to have been taken. On the lower side of the station there are several houses without water-supply. Throughout the village there is abundant evidence of the insufficient scavenging provision. These conditions, in my opinion, indicate defective sanitary arrangements and administration. They might at any time give rise to throat illness or enteric fever, and their existence is such as to fully justify the statements that have been made, which are to the effect that the sanitary condition of Haslemere is such as to be dangerous to the health of the inhabitants and visitors. The above report is the result of a brief inspection such as I have been able to make in the limited time that could be allowed. It is made for the purpose of furnishing you with information with regard to the statements which have been made on high authority respecting the sanitary condition of a village in the county. A more detailed inspection is required, with that of a sanitary surveyor or engineer, for the purpose of reporting on the works that will be found necessary for providing the village with a good system of water-supply and drainage. This can only be done at the instance of the Hambledon Union Rural Sanitary Authority, and I beg to suggest that the County Council be recommended to send a communication to that sanitary authority." The report was approved, and copies of it were ordered to be forwarded to the Hambledon Rural Sanitary Authority and the Local Government Board.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Blackpool Urban District.—Making the necessary deduction for deaths amongst visitors, the death-rate for 1889 was 16·5 per 1000, and the zymotic rate was 1·9. Some outlying areas are without a proper water-supply, and these areas include dairy farms. Inspection of house drains is supplemented by the smoke test, and in this way defects are found out and remedied, and Dr. Welch suggests that the drains of all new houses should thus be put to the test; he also expresses a hope that improvements will be effected as regards the building by-laws. The sewers are carefully looked to, but systematic flushing and more efficient ventilation are required as regards some of them. Under the system of notification 310 cases of infectious diseases were reported, and it is stated that better effect will be given to this system by means of the new sanatorium which is now in course of construction. A steam disinfecting apparatus is also being provided. In the old sanatorium forty-eight cases were admitted, the establishment being put to a severe strain in consequence. Diphtheria has unfortunately acquired a foothold in Blackpool as in other towns; and in referring to its cause Dr. Welch finds insanitary defects very general. At the same time, his experience hitherto does not enable him to say more than that these conditions tend to aggravate the disease. Circumstances have led him to the opinion that there is a quiescent period in the history of the infective agent which may at suitable seasons and under certain unknown conditions reassert itself, a consideration which favours the hypothesis that the microbe is capable of growth and development outside the human body. Appended to Dr. Welch's report is a detailed one by the sanitary inspector, and the work recorded goes to show how various premises, including dairies, slaughter-houses, common lodging-houses, and rag-stores, are subjected to constant supervision. Work is also done under the Sale of Food and Drugs Act, and the general tenour of the reports indicates that the health department of the borough is under careful and efficient supervision.

Wavertree Urban District.—The general death-rate for 1889 was 16 per 1000, as opposed to 14 in 1888, but the infantile death-rate has for the past few years shown a steady diminution. Scarlet fever was very prevalent, and the need of a hospital for infectious diseases in the district is again pointed out by Dr. Harvey, who explains how little isolation could be resorted to in its absence. Some few patients were sent to Liverpool, but such an arrangement will hardly suffice now that notification comes to help the authority in hearing of first attacks with a view to preventive action. Dr. Harvey gives the results of his numerous inspections, and in some instances he records the remedial action which was taken in consequence.

Stafford Rural District.—This district has for years past enjoyed a small death-rate, and last year, when it was 11·9 per 1000, it was practically at the mean of the previous

ten years. But the phthisis death-rate is regarded as too high, and it is pointed out by Dr. George Reid, the medical officer of health, that many of the cottages where it is most prevalent are built on a low-lying damp soil, where the ground water is commonly within about two feet of the surface. Natural drainage is also interfered with by the back-pounding of the river, as the result of mill weirs, a practice that is most detrimental to the health of the district in which the water level is thus abnormally kept up. Amongst other matters to which Dr. Reid draws attention are the warming and ventilation of schools, and he states that out of eighteen schools as to which he has made recommendations during the last two years, three have been efficiently dealt with, in four considerable improvements have been carried out, in three other changes have been made on principles which have given but little benefit, in two instances certain changes were just in progress, leaving six altogether unremedied. Such schools as are actually in fault should another year be distinctly specified, and it is then quite possible that their cases may come under the notice of the Education Department.

Batley Urban District.—Dr. Alfred Swann gives the death-rate of this Yorkshire borough as 18·78 per 1000, and the zymotic rate as 2·10; and he adds that one-fifth of the deaths in Batley were due to diseases known to be preventable. In this connexion he refers to the energetic action taken by the sanitary committee; but it is noteworthy that Batley, together with other sanitary districts near by, have never yet made any proper arrangement for the isolation of patients suffering from infectious diseases. And this town has for a long time past been characterised by conditions very similar to those which are summarised in the report as still existing—namely, houses without means of drainage, houses befouled by middens, houses still connected with drains, houses with inadequate privy accommodation, and houses unfit for occupation by reason of dampness and otherwise. Dr. Swann has the credit of having pointed such matters out, and of indicating their serious import, and it is to be hoped that such measures as have been taken, including the passing of a new code of by-laws, will before long go a long way towards removing such old-established conditions tending to ill-health as obtain in the borough.

Okehampton Rural District.—This rural district has a comparatively small death-rate; it was 12·3 per 1000 in 1888 and 13·4 in 1889; and amongst the diseases as to which diminution is shown phthisis is especially mentioned as declining, owing to improvements in the construction of dwellings, to the draining of damp subsoils, to the prevention of overcrowding, and to the ensuring of adequate ventilation, especially in sleeping rooms. Certain occurrences of typhoid fever are referred to by Mr. W. S. Snell, who takes occasion to remind the sanitary authority that there is still ample room for further work in the direction of improved sewerage, drainage, and water-supply. Diphtheria tends to occur in the village of Bratton, where it is considered to be maintained as the result of a damp, undrained subsoil; there are also great difficulties in securing the isolation of first attacks of throat disease. Amongst the pieces of sanitary work performed during the year are a number of minor improvements in drainage, and changes for the better in school closets by the substitution either of pails or trough closets for the old privies, and it is stated generally that much useful work has been carried on. There still remains in the district a large number of unhealthy, comfortless dwellings, but improvement is gradually being effected as regards the housing of the labouring classes.

Cardiff Urban District.—A very exhaustive report on this borough has been submitted to the Town Council by Dr. Edward Walford. The general death-rate was 19·4 per 1000 on the estimated population as given by the Registrar-General, and 17·2 as calculated on the basis of the number of inhabited houses. But even the former rate is much below the average of the past five years. The zymotic rate was 2·1 per 1000, and deaths under one year of age were at the rate of 157 per 1000 births, the most prevalent infantile causes of death being the infectious fevers, diseases of the nervous system, diarrhœa, and pulmonary disorders. Amongst the zymotic diseases, 8 deaths from diphtheria are recorded; there were also 20 deaths from "croup," apart from laryngitis and other diseases of the larynx. In all, 42 cases of diphtheria were heard of, but there is no record for 1889 as to the number of attacks from membranous croup. Of scarlet fever 166 cases were reported, as also 132 of measles, and as regards the latter disease it is stated that it continued to spread until the middle of December, when the schools were closed, and when a sudden and decided decline in the severity of the disease set in. This subject of school closure in the case of measles was evidently carefully thought out, and the difficulties attendant on its being so infectious in the early stages of the disease, and on children mingling for play in the streets when not at school, were weighed. But, after all, it is held that school closure operated beneficially, and this apart from any natural decline in the epidemic. On the subject of infantile diarrhœa, Dr. Walford points to the fact that, though there has been diminution in Cardiff, yet the rate of decrease is not so satisfactory as it should be; and, referring to the conclusions arrived at by Dr. Ballard as to this disease, he indicates the direction of future preventive measures. Amongst the points of interest which he notes is the fact that amongst the Irish population the diarrhœa death-rate per 1000 was only 0·28, whilst it reached 1·08 amongst the population as a whole, a result which he attributes to the practice of Irish mothers suckling their children. Amongst 395 fatal attacks of diarrhœa concerning which inquiry as to diet was made, it was found that 352 of the infants were fed on cow's milk, only 6 had been fed entirely at the breast, and the remaining 37 had had other kinds of food. The distribution of a large number of the more preventable diseases over the different areas, and even in the different streets of the borough, is set out in great detail; and if this information could only be supplemented by charts, it would be invaluable in connexion with the future sanitary administration of the district. Amongst other matters entered into is the compulsory notification of infectious diseases, and it is satisfactory to note that advanced progress has been made in the direction of procuring for the borough such an isolation hospital as will succeed in securing the early separation of the infectious sick from amongst their unprotected fellows.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5608 births and 3305 deaths were registered during the week ending July 12th. The annual rate of mortality in these towns, which had been 16·9 and 17·4 per 1000 in the preceding two weeks, rose again last week to 17·7. The rate was 17·4 in London and 18·1 in the twenty-seven provincial towns. During the thirteen weeks of last quarter the death-rate in the twenty-eight towns averaged 19·1 per 1000, and was 0·8 below the mean rate in the corresponding periods of the ten years 1880–89. The lowest rates in these towns last week were 10·4 in Norwich, 11·0 in Bristol, 11·7 in Hull, and 17·6 in Derby. The rates in the other towns ranged upwards to 22·8 in Liverpool, 23·1 in Manchester, 24·3 in Bolton, and 25·3 in Newcastle-upon-Tyne. The deaths referred to the principal zymotic diseases, which had been 446 and 464 in the preceding two weeks, further rose last week to 587; they included 177 from diarrhœa, 163 from measles, 112 from whooping-cough, 70 from scarlet fever, 39 from diphtheria, 26 from "fever" (principally enteric), and not one from small-pox. The lowest death-rates from these diseases were recorded in Portsmouth, Wolverhampton, Halifax, and Bristol, and the highest rates in Birkenhead, Plymouth, Liverpool, and Leicester. The greatest mortality from measles occurred in Derby, Birmingham, Brighton, and Plymouth; from scarlet fever in Birmingham, Manchester, and Liverpool; from whooping-cough in Salford, Birkenhead, and Derby; and from diarrhœa in Leicester. The mortality from "fever" showed no marked excess in any of the twenty-eight towns. The 39 deaths from diphtheria included 22 in London, 4 in Liverpool, 4 in Salford, 3 in Manchester, 2 in Plymouth, and 2 in Birmingham. No death from small-pox was registered in any of the twenty-eight towns. Only one small-pox patient was under treatment in the Metropolitan Asylum Hospitals at the end of the week, and not one in the Highgate Small-pox Hospital. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of last week was 1348, against numbers increasing from 1067 to 1283 on the preceding seven Saturdays; the new cases admitted during the week were

153, against 136 and 150 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 206 and 244 in the preceding two weeks, declined again to 225 last week, but exceeded the corrected average by 25. The causes of 52, or 1·6 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Nottingham, and in four smaller towns. The largest proportions of uncertified deaths were recorded in Liverpool and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·6 and 19·9 per 1000 in the preceding two weeks, further declined to 19·7 in the week ending July 12th, but exceeded by 2·0 the rate which prevailed during the same period in the twenty-eight English towns. The rates in the eight Scotch towns ranged from 14·6 in Leith and 15·0 in Dundee to 23·0 in Glasgow and 25·0 in Perth. The 509 deaths in the eight towns showed a decline of 5 from the number in the previous week, and included 38 which were referred to whooping-cough, 24 to measles, 13 to diarrhœa, 5 to "fever," 3 to scarlet fever, 3 to diphtheria, and not one to small-pox. In all, 86 deaths resulted from the principal zymotic diseases, against 80 and 76 in the preceding two weeks. These deaths were equal to an annual rate of 3·3 per 1000, which slightly exceeded the mean rate last week from the same diseases in the twenty-eight English towns. The highest death-rates from these diseases were 4·5 in Glasgow and 9·3 in Perth. The fatal cases of whooping-cough, which had declined from 37 to 24 in the preceding three weeks, rose again to 38 last week, of which 20 occurred in Glasgow, 6 in Edinburgh, 4 in Aberdeen, and 4 in Perth. The deaths from measles, which had been 26 and 28 in the previous two weeks, declined again last week to 24, and included 16 in Glasgow and 5 in Dundee. The 5 fatal cases of "fever" exceeded by 1 the number in the preceding week, and included 2 in Aberdeen; and of the 3 deaths from diphtheria 2 were recorded in Glasgow. The deaths referred to diseases of the respiratory organs, which had been 88 and 102 in the preceding two weeks, declined again last week to 87, but exceeded the number in the corresponding week of last year by 31. The causes of 49, or nearly 10 per cent., of the deaths in the eight towns were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 20·8 and 23·1 per 1000 in the preceding two weeks, declined again to 21·3 during the week ending July 12th. During the thirteen weeks of last quarter the death-rate in the city averaged 23·6 per 1000, the rate for the same period being 17·3 in London and 19·3 in Edinburgh. The 144 deaths in Dublin showed a decline of 12 from the number in the previous week; they included 5 which were referred to measles, 4 to "fever," 3 to whooping-cough, 1 to diarrhœa, and not one either to small-pox, scarlet fever, or diphtheria. Thus the deaths from the principal zymotic diseases, which had been 15 and 8 in the preceding two weeks, rose again to 13 last week; they were equal to an annual rate of 1·9 per 1000, the rate from the same diseases being 3·8 in London and 1·7 in Edinburgh. The 5 fatal cases of measles exceeded those recorded in any week since the beginning of April. The deaths referred to different forms of "fever," which had been 5 and 3 in the previous two weeks, rose again last week to 4. The fatal cases of whooping-cough, which had been 4 in each of the preceding three weeks, declined to 3 last week. The deaths both of infants and of elderly persons showed a considerable decline from those recorded in the previous week. Four inquest cases and 2 deaths from violence were registered during the week; and 45, or nearly a third, of the total deaths occurred in public institutions. The causes of 15, or more than 10 per cent., of the deaths were not certified.

PRESENTATION.—Mr. Thomas Odell, M.R.C.S., has been presented by the members of the Hertford Provident Society, on his retirement from the office of medical officer to the Society, with a handsomely engraved and chased plated and gilt fruit dish, and a silver gilt spoon to match, in recognition of his long services as their medical officer.

Correspondence.

"Audi alteram partem"

HYDERABAD CHLOROFORM COMMISSION.

To the Editors of THE LANCET.

SIRS,—I have read with great interest the Report of the Second Hyderabad Chloroform Commission, published in THE LANCET of June 21st last, the more so as their results agree with those which I obtained after a long series of experiments which I performed during the years 1885–86, with the object of ascertaining the "influence of anæsthetics on the respiration." The manner of experimenting which I adopted was mainly as follows. A cannula is connected by elastic tubes at one end with a bottle containing pieces of sponge saturated with the anæsthetics, at the bottom of which is inserted a tube for pumping the air from without; the other end of the cannula is attached to a second cannula, inserted into the trachea, and fastened to it. The main cannula has two tubes springing from it, one communicating with the air and the other with a style which writes on a revolving drum. The mouth of the tube communicating with the anæsthetic has a valve which opens during inspiration and is shut during expiration; the tube communicating with the air has a valve which opens during expiration and remains shut during inspiration. This arrangement allows the air passing through the sponge charged with the anæsthetic to enter the lungs, and does not permit the air expired to enter the bottle containing the anæsthetic.

I enclose two pamphlets, which I published in 1886, in which you may see some selections from the different tracings I obtained. The conclusions I arrived at by this mode of experimenting with ether and chloroform are the following:—1. That by administering the two anæsthetics in the manner explained, when death ensues, it is *always* caused by arrest *firstly* of the respiration, and *afterwards* of the heart. 2. That in all the animals experimented upon (rabbits, cats, and dogs) chloroform acts most powerfully on the respiration, stopping it most surely if, after the animal is completely anæsthetised, the anæsthetic is continued for some time. 3. That ether stops the respiration in frogs, rabbits, and cats, but its effects are more fugacious, so much so that the respiration is easily restored by employing the *direct* artificial respiration. 4. That ether does not stop the respiration of dogs, even after a continuous and prolonged administration of three hours. 5. That for these reasons ether is much safer than chloroform. This applies to animals; and if the same laws are applicable to man, I agree entirely with the Hyderabad Commission on the practical point that it is not the pulse that is the guide in anæsthetising, but the respiration. In regard to artificial respiration, that which I call *direct* artificial respiration consists simply in applying the mouth of the operator to the tube which communicates with the trachea, and expiring and inspiring, just as in normal respiration. This tube, as I noted before, has a lateral tube communicating with the external air, thus establishing a lateral current by which all the air contained in the lungs is pumped out by the operator's inspiration, and new pure air is pumped into the lungs with his expiration. By this means I succeeded in resuscitating all my dogs and rabbits, even though three minutes had elapsed after stoppage of the respiration; while with any other method of artificial respiration until now employed (*indirect*), not only could I not succeed in such cases, but in the great majority of cases the *indirect* artificial respiration was unsuccessful, even directly after the stoppage of respiration. To me this kind of direct artificial respiration was the most striking feature of my experiments, and I proposed to adopt it in the case of man. This is very easily done by a metallic cannula, conveniently curved at one end, like a common catheter, and provided with a lateral tube in order to establish the lateral current. The curved end, which is cut like the end of a Ferguson's speculum, is easily introduced into the trachea through the mouth, and by the operator applying his mouth—or, if objectionable, a pumping apparatus—to the other end, natural respiration is imitated. I am quite satisfied that no other form of artificial respiration equals this in efficacy. As to the manner of its physiological action, I think that not only by this method is all the anæsthetic in the lung directly pumped out, but that the pure air pumped into it has a vivifying

action on the nerve endings in the lungs, which are paralysed before paralysis of the centres of respiration sets in. I remain, Sirs, most faithfully yours,

C. RUATA,
July 2nd, 1890. Prof. of Materia Medica to Perugia University.

To the Editors of THE LANCET.

SIRS,—Surgeon-Major Lawrie, in his interesting article published in THE LANCET of June 21st, evidently contends that the sudden fall in blood pressure during the administration of chloroform is invariably due to a condition of asphyxia, though he admits a gradual fall in blood pressure, unattended with danger, during the administration of this anæsthetic. I would call the attention of your readers to the fact that the condition which often ensues on the administration of chloroform is a condition of which the most apparent visible sign is pallor; asphyxia is not, however, accompanied with pallor, but with distension of systemic veins consequent on contraction of small arteries, and increase of arterial tension (blood pressure raised), which condition again is consequent on stimulation of the vaso-motor centre due to circulation of blood deficient in oxygen. Now, this sequence of events in asphyxia produces a visible condition of lividity quite different from the pallor which is the danger signal in chloroform administration. In fact, to recapitulate, we have in asphyxia increased blood pressure with lividity; in fatal chloroform narcosis we have the opposite condition—viz., diminished blood pressure with pallor. It appears to me the contention of Surgeon-Major Lawrie—that the danger is due to asphyxia, and not to the direct action of the chloroform vapour—is quite erroneous.—I am, Sirs, yours truly,

JOHN HOPE POTTER.
Cullompton, Devon, June 30th, 1890.

TREATMENT OF OBSTRUCTIVE DYSMENORRHŒA.

To the Editors of THE LANCET.

SIRS,—Dr. More Madden, in a clinical note under the above heading which appears in your issue of July 5th draws attention to a new instrument devised by him for "the rapid and permanent dilatation of the cervical canal in the treatment of stenosis." Now, I am sure that the failure to relieve sterility and dysmenorrhœa due to stenosis constantly arises from dilatation only of the canal being carried out. In these cases all that is usually done is to dilate the cervical canal, when, owing to the nature of the uterine contractile tissue, it sooner or later returns to its condition of stricture. A method which is more surely to be followed by success is to combine the dilatation with a certain amount of tearing of the muscular fibres, so rendering the canal less liable to return to its constricted state. The best way of proceeding is to place the patient in the semi-prone position, introduce a Sims' speculum (or my modification with a short blade), hook down the uterus, pass three or four graduated sounds—say, up to No. 11 or 12,—then with a small, straight knife make a *slight* bilateral incision up to and including the inner os, then introduce Sims' uterine dilator (like a three-bladed glove-stretcher), and dilate with hand pressure until the fibres are felt to give way (the screw pressure should not be used, as a screw is insensate); after which see that a large sound (as No. 15) will pass easily; then introduce a straight glass stem, to be kept in for a few days. If it is thought undesirable to leave a stem in the cervical canal, a thick sound can be passed daily for a short time to prevent the canal from closing. This method, with proper precautions, I have found very successful.

I am, Sirs, yours faithfully,
Harley-street, July 5th, 1890. HEYWOOD SMITH.

THE REFORM OF OUR MEDICAL CHARITIES.

To the Editors of THE LANCET.

SIRS,—It may interest those who are working on behalf of our valuable charities to know that the Medical Society of Victoria, Australia, has passed the following resolutions: "This Society is of opinion that (*a*) great imposition on the part of well-to-do people is practised at the public hospitals, which is contrary to the principle on which these institutions were founded, and on which they should be conducted; (*b*) all hospitals receiving Government aid annually should be devoted solely to the treatment of the destitute poor; (*c*) paying patients should not be admitted into hospitals receiving Government aid granted for the benefit of the destitute poor; (*d*) a 'wage limit' should be fixed for all hospitals (i.e., all those earning more than a certain amount should be excluded); (*e*) the circumstances of each applicant for admission should be investigated by an officer of the hospital, appointed for the purpose, who should use wide discretionary power in special cases."

I may just add that at the Royal Hospital, Belfast, and at the Southport Infirmary, the "wage limit" has been put into force. Glasgow and Liverpool have thrown open their Corporation Fever Hospitals for the instruction of students, while the Poor-law authorities at Belfast, recognising the vast mine of teaching material contained in their workhouse infirmary, have opened this also for the use of students. Manchester, Chorley, Portsmouth, Stafford, Bristol, Coventry, Hull, Oldham, Preston, Warrington, Wigan, Salford, have all affixed a "wage limit," and so the important question, For whose use do our medical charities exist? is being answered in a practical manner, and in a way which will soon restore the public confidence in hospital management and administration, and encourage them to give more liberally.

I am, Sirs, yours truly,
Liverpool, July, 1890. ROBERT R. RENTOUL, M.D.

"HISTORY OF URIC ACID IN THE URINE."

To the Editors of THE LANCET.

SIRS,—Referring to Sir Wm. Roberts's paper on the above subject, read before the Royal Medical and Chirurgical Society on March 25th last, I notice that an interesting point arose as to the presence or absence of salt in the food of natives of Southern China. Dr. Jas. Johnson, in reply to Mr. Reginald Harrison, is reported to have said that there was a marked deficiency in the amount of salt in the food in Southern China (THE LANCET, March 29th, 1890, p. 704). I have practised for twelve years in "South China," and been in intimate relation with the natives, but I am bound to say that I have never noticed or heard of the deficiency to which Dr. Johnson alludes. It is true that the production and sale of salt all over the empire is a strict Government monopoly, but I am not aware that anyone finds difficulty in procuring, at reasonable price, all they require. I may add that the consumption of salted fruits and other articles of diet is peculiarly common in South China. By "South China," I should mention, is generally meant those provinces bordering on the sea, and which lie south of Shanghai; at least this is the sense in which the term is used by resident Westerns, though inquiries lead me to believe that, in so far as the question under discussion is concerned, what I now state will apply equally well to those inland parts coming under the designation in its full geographical sense. Save in Canton, where cases are very numerous, vesical calculi are wonderfully rare in China as a whole, and, as Dr. Dudgeon puts it, the conditions governing the prevalence of stone in China are in marked contrast to those observed in western countries. None of my colleagues, the surgeons to the Imperial Customs, mention in their various reports salt deficiency, although the food supply generally has been fully dealt with; I am led to think therefore that Dr. Johnson has been misinformed.

I am, Sirs, yours faithfully,
Takow, Formosa, May 10th, 1890. W. WYKEHAM MYERS.

"THE VULGARISATION OF MEDICAL SCIENCE."

To the Editors of THE LANCET.

SIRS,—In reference to your annotation (with the main principle of which I cordially agree) under this title, will you in fairness permit me briefly to point out: (1) That my paper in the *National Review* involves no pathological problem whatever, abstruse or otherwise; (2) that the very small modicum of technical pathology contained in my *Nineteenth Century* article—such as that instanced in your note—is introduced but incidentally, and that it could not well have been omitted without breaking the thread of the argument, which is here compelled

to sift those cases of malignant disease owning a recognised mechanical causation from the remainder, and also the relative proportion of the two sexes among cancer sufferers; (3) that the practical purpose subserved by such an essay (dealing mainly with general causes) is simply that elementary instruction in the general laws of health, which I imagine no medical scientist, however exclusive, would deny to the laity as their simple right, which it would be absurd to expect them to seek in the columns of medical journals, and from the utter want of which in this particular department of the *ars medica* (as I have had constant occasion for years past to notice) many valuable lives are annually sacrificed.

I am, Sirs, your obedient servant,

Gloucester-place, W., July 13th, 1890. HERBERT SNOW.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Ingleby Lectures.

THE Ingleby Lectures, two in number, were delivered this year by Mr. Whitcombe, the superintendent of the Borough Asylum, the subject being the Etiology and Prevention of Insanity in Females. The chair on each occasion was taken by the Dean of the Faculty of Queen's College, Professor Windle. Mr. Whitcombe stated in the course of his lectures that during the twenty years he had been connected with the asylum 2460 women suffering from insanity had been admitted into the institution, the causes on analysis being attributed to heredity, intemperance, and the vicissitudes of female life. As regards the popular estimation of religious excitement as a factor in insanity, he was inclined to believe that religion rather coloured the aberrations of a mind already disordered, than gave rise to them. The frequent association of heart disease with insanity was pointed out as being evidenced by 60 per cent. of the cases. Some interesting observations on prevention were made in the second lecture, and listened to by an appreciative audience.

Over-pressure in Infant Schools.

An inquest was lately held on a child seven years old, who had died of meningitis just after examination. The mother stated that the child was troubled because he could not do his sums, and that while he was delirious he had talked of hardly anything else. The medical witness could not say definitely that over-pressure had brought on the brain inflammation, although he believed that it might have such an effect. Under these circumstances, a verdict of death from natural causes was returned.

The Kyrle Society.

This Society has a Boys' Club and School of Handicraft which does a good work in the slums. Some forty or fifty boys, many of them derived from the roughest class, had attended during the winter months, and leather work and wood carving had been taught with much interest. It was proposed to establish a guild of handicraft, with classes for the teaching of carpentry, wood work, leather work, and brass work. A committee was formed for this object with every prospect of success.

Hospital Reform Inquiry.

Another stage has been reached in this inquiry. At a meeting held on the 2nd inst, his Honour Judge Chalmers in the chair, the replies were submitted to the questions addressed to the various hospitals. The committee decided that witnesses should be invited to attend the succeeding meetings to give evidence on the subject. The replies to the seventeen questions issued embrace a variety of interesting and useful information.

Birmingham, July 15th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Newcastle and Gateshead.

THE Cathedral Nurse and Loan Society of Newcastle has held its annual meeting, and has, as before, presented a record of good work and satisfactory progress in all its branches, 1670 cases having been visited and 17,533 visits paid. The large amount of sickness in the spring of the present year has taxed the resources of the institution and the health of the superintendent (Miss Coleman) and the staff of nurses severely, while ninety convalescents have been benefited by a stay of a few weeks at the Cottage Home at Shotley Bridge.

Manslaughter by a Parent.

At the summer assizes now going on, two prisoners were tried for the manslaughter of their infant son, aged two months. The evidence showed the most gross neglect on the part of the mother, the child at death only weighing four pounds and a half, the result of inattention and starvation, the wretched woman being given to drinking. The jury only took seven minutes to bring in their verdict of "Guilty" against the mother, and she was sentenced to five years' penal servitude. The male prisoner was found "Not guilty." The child was insured, but not having lived three months the policy becomes void. Yet some of our local papers write very severely on the fact of the agent of an insurance company calling weekly (this being given in evidence) and receiving payments on the life of this starving infant.

Sunderland: the Ryhope Accident.

The secretary of the Sunderland Infirmary has received a cheque for £250 from the directors of the North-Eastern Railway as a special donation to the funds, in consideration of the extra expense the institution was put to, and the additional labour and anxiety caused to the staff, by the cases arising out of the Ryhope accident. The directors have also tendered their thanks to the committee and staff for what was done by them in the matter.

New Baths at Gateshead.

The Corporation of Gateshead have erected most commodious new baths for the use of the public, including a swimming bath, 80ft. by 30ft. The baths are to be open at a very small charge, and boys under sixteen may use them for a penny. Most efficient means have been taken for the lighting, warming, and ventilation of these baths which are a credit to the town.

A Park for Stockton.

Stockton-on-Tees has at last acquired a public park. There has been much discussion in the Town Council about the propriety of purchasing some eligible fields for the purpose; but Mr. Ropner, a large ship-owner and ship-builder at Hartlepool and Stockton, has most generously stepped in, and offered to purchase the estate and present it to the town, at a cost of £8000.

West Hartlepool Hospital Sunday.

The Hospital Sunday demonstration at West Hartlepool in aid of the Hartlepool Hospital took an imposing form. About twenty-three orders of friendly societies were represented, forming a procession, with a dozen bands, of about a mile in length to the Armoury grounds, where two great meetings were held within and one without the grounds, while an overflow meeting was held in the Parade ground, attended by about 1000 persons.

Tees Port Sanitary Authority.

At the last meeting of the Tees Port Sanitary Authority reference was made to the receipt of a letter from the Local Government Board with regard to the outbreak of smallpox on the screw steamer *Romola*, which had been caused by a stowaway. The central authorities had been in communication with the Board of Trade, and they approved of the suggestion of the Tees Port Sanitary Authority that the law which now requires captains of vessels to enter in their logbook reports of sickness among the crew or passengers should be extended to stowaways, and intimated that when a fitting opportunity occurred steps would be taken to secure the necessary alteration of the Act.

Newcastle-on-Tyne, July 16th.

EDINBURGH.

(FROM OUR OWN CORRESPONDENT.)

The Final Examinations at the University.

THESE examinations finished last week. Out of 303 candidates, only 143 have passed in all the subjects; some of those who have failed only in part have been granted a special examination in October.

The Second Professional Examination.

The written examination was held on Friday and Saturday, and the orals began on Monday.

Clinical Instruction in Workhouse Hospitals.

It has been already intimated that the examining bodies here have declined to recognise the Workhouse Hospital as qualifying in clinical work, the result being that students have had to travel daily to Glasgow to receive clinical instruction. It is now intimated that an application is to be made for admission to, and clinical instruction in, the Royal infirmary. Already the demands on clinical material in the infirmary are so great that the managers will find it difficult to grant a request which means still greater demands upon it.

The End of the Summer Session.

On Friday this week the last of the summer classes rises, and the school here enters on its long vacation. A good many men are already out of town, and all are looking forward to holidays.

Health of the City.

The mortality last week was at the rate of 15 per 1000. Diseases of the chest accounted for 18 deaths, zymotic causes for 8. The intimations for the week included 6 cases of typhoid, 4 of diphtheria, 21 of scarlatina, and 24 of measles.

The Social and Sanitary Society.

The last meeting for the season of the committee of this Society was held on Monday. It was intimated that reports on the sanitary condition of the poorer parts of the city had been forwarded to the Health Committee and Town Council; that upwards of 100 visitors had been at work; that 4471 health leaflets had been distributed in three years; that the health conditions of the city were steadily progressing; and that the sentiment in favour of cleanliness, light, and ventilation had been much quickened.

Arbroath Infirmary.

At the annual meeting of the subscribers to the Arbroath Infirmary, it was intimated that 230 in-patients had been treated during the year, as compared with 176 in the previous year. The annual income was slightly over the expenditure.

Edinburgh, July 15th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

DUBLIN.

Death of Mr. David Henry Hadden, L.R.C.S.I.

THIS gentleman died quite suddenly on Saturday last while hurrying up the steps of Harcourt-street Railway Station. He fell, and on being raised life was found to be extinct, death having occurred from heart disease. He resided at Rathmines, one of the Dublin suburbs. Deceased was about forty-five years of age.

Poisoning by Mussels.

The inquest which had been adjourned for the purpose of obtaining scientific evidence was resumed last Thursday, when Sir C. Cameron stated the result of his investigations. None of the ordinary known poisons were detected in the cooked mussels, but the use of certain tests proved that an alkaloid was present both in the cooked and uncooked mussels. The quantity, however, was too minute to enable Sir Charles Cameron to make a complete analysis of it. For although there are a very considerable number of cases of poisoning from mussels on record, yet only one investigator has obtained the mussels in sufficient quantity to be able to extract weighable quantities of the poisonous alkaloid which they contained. The shells of the Seapoint mussels were remarkably brittle, indicating a diseased condition of the animal, and the liver was very much enlarged. The jury have recommended the Blackrock Commissioners to take steps to have the pond where the mussels were collected, and which is a receptacle for sewage matter, filled up without delay.

Pembroke Township: Notification of Infectious Diseases.

Mr. Chapman, F.K.Q.C.P., consulting sanitary officer of the township, does not consider the Notification of Infectious Diseases Act as suitable for adoption in this suburb. Under the Act, he alleges, all the secretarial duties—such as keeping the books, issuing of forms, receipts, and custody of certificates, payment of fees to medical practitioners, and the carrying out of legal proceedings against defaulters—are imposed on the medical officer of health of the district instead of the executive sanitary officer. Sir Robert Jackson, C.B., F.R.C.S., one of the commissioners, is strongly in favour of the Act being adopted; so is the chairman, Sir George Moyers; and it has been resolved to adjourn the consideration of the matter for a month, the executive sanitary officer then to report fully upon it, and also to send the Local Government Board a copy of the letter received from Mr. Chapman, and obtain their opinion.

Closing of the Galway County Infirmary.

In consequence of the litigation which has been going on for some time, and the discontinuance of the Grand Jury grant, a special meeting of the governors was held last week to determine what course under the circumstances should be pursued. Mr. Persse has at his sole cost very generously maintained the institution for the past six months, but this could not go on for an indefinite period, and the governors, feeling this, have unanimously determined that the infirmary shall be closed. This result is greatly to be deplored, inasmuch as infirmaries are admirable institutions, and their benefits are utilised by many who would not enter the walls of the Union Hospital.

Rathdrum Union Workhouse.

At a recent meeting of the guardians Mr. Richard R. Leeper, F.R.C.S.I., was elected medical officer of the Union Workhouse. There were eleven candidates for the post, the emoluments of which are £110 yearly.

Surgeon Parke, of the Emin Pasha Relief Expedition, has presented to the Science and Art Museum, Dublin, some arrows (poisoned) collected by him from the dwarf tribes of Central Africa, near Fort Bodo.

Dublin, July 15th.

BELFAST.

The Belfast Hospital for Diseases of the Skin.

At the annual meeting of the friends of this charity, held on July 4th, I learn from the report that during the past year 1116 persons were treated, of whom 21 were admitted into the wards. The income during the year was £298 2*s.* 4*d.*, and the expenditure £271 1*s.* 11*d.* Dr. Ross has been appointed consulting physician, in room of the late Dr. H. S. Ferguson. In his medical report, Dr. H. S. Purdon said he had now completed a quarter of a century of work as honorary medical attendant at the hospital. During this period 23,787 cases of every form of skin disease had come under his observation, and out of a total of 376 intern patients there had been only three deaths.

The Ulster Medical Society.

The annual meeting of this Society was held on July 3rd. The secretary's report and the treasurer's statement of accounts (which showed a balance of £98 19*s.*) were received and passed. On the motion of Professor Dill, it was decided to tender to the sorrowing family and friends of the late Dr. H. S. Ferguson the sincere sympathy of the members of the Society in the loss they had sustained in his death. The following office-bearers for the session 1890-91 were then elected:—President: Dr. Dempsey. Vice-Presidents: Professor Sinclair and Dr. Bigger. Council: Dr. Dill, Dr. Lindsay, Dr. Byers, Dr. Lewers, Dr. O'Connell, Dr. Whitla. Treasurer: Dr. O'Neill. Secretary: Dr. McCaw. Librarian: Dr. Calwell. Pathological Secretary: Dr. Burden.

North of Ireland Branch of the British Medical Association.

The twelfth annual meeting was held in Belfast on July 10th, when the report and financial statement were presented and passed. Dr. W. A. M'Keown, surgeon to the Ulster Eye, Ear, and Throat Hospital, was elected president for the ensuing year. Papers on medical subjects were brought before the members by Dr. Thompson (Omagh), Dr. J. A. Lindsay, Dr. Dempsey, Dr. O'Neill, Dr. Byers, Dr. M'Keown, Dr. Calwell, and Dr. Cecil Shaw.

Belfast, July 15th.

CONVALESCENT HOME, WHITLEY.—The annual report for the past year is highly satisfactory, both financially and as to the increased usefulness of the institution. The medical statistics show that the total number of cases treated during the twelve months was 1548 (an increase of 171 on 1888). Of these, 823 were cured, 683 greatly benefited, 40 remained *in statu quo*, and two died. The financial statement showed a balance at the banker's of £348 8*s.* 5*d.*

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Foreign Doctors in France.

THE Minister of Public Instruction has recently submitted his new Bill on the Practice of Medicine in France to the Parliamentary Committee appointed to consider the question. By this Bill the grade of *Officier de Santé* is abolished. It also provides for the creation of a Board of Examiners, who will travel about to conduct the examinations in the various universities of the Republic. These examiners will not be charged with teaching, and the professors now teaching will cease to examine. As regards English and other foreign doctors, a distinction will henceforth be drawn between those who desire to practise in any part of the dominions of the Republic and those who desire merely to follow the teaching of the French medical schools. The former will, without any exception, have to undergo the same courses of study and pass the whole of the examinations required of a French student before he is allowed to practise. To the latter category will be given certificates setting out that they have followed the lecturrs or courses; but these certificates will in no case entitle their holders to practise.

Craniectomy in Microcephaly.

At the last meeting of the Academy of Sciences Professor Verneuil called attention to a rare operation which Professor Lannelongue had just performed on a child four years of age, almost idiotic, who was a patient in the Children's Hospital, in M. Lannelongue's ward. The child, a little girl, appeared to be no more than two years of age. Her skull was only about one-third the normal size. Her height was sixty-six centimetres; the chest capacity forty-five centimetres. She could not walk or stand on her legs without support; she never laughed, and nothing appeared to interest her. Of three hypotheses adduced to explain microcephaly, that of M. Lannelongue himself seems most valuable. Prof. Virchow supposes the condition to be brought about by the ossification of the sutures of the skull, and M. Broca that it arises from encephalic lesions. M. Lannelongue attributes the condition to cerebral lesions as well as to the narrowness of the cavity of the skull, and he argues that if more space were given to the brain the microcephaly would disappear in the same manner as do certain epileptic conditions. M. Lannelongue, acting on these ideas, and guided by a profound study of microcephalic skulls, attempted the operation on the little girl, and gave more room to the brain by opening the skull. He made, along the median line of the skull, a long and narrow incision, corresponding to the sagittal suture, and extending from the frontal to the occipital suture. He removed from the left side of the skull, which was more depressed than the right, a piece of bone nine centimetres long by six millimetres wide. The dura mater was left intact, and the superficial wound was reunited without drainage. Union took place by first intention. The operation was performed on May 9th, and on June 15th a change was obvious. On that date the patient walked, smiled, took an interest in all that passed around her, and played with a doll, which she had never done before. The idiot was completely transformed into an intelligent child. About a week ago a similar operation was performed by Professor Lannelongue on another child. The resection was still more extensive, and it is hoped that this will be another successful case. Professor Verneuil, commenting on this, said that the operation was extremely original, and did credit to the science and skill of M. Lannelongue. It might now be said that craniectomy in microcephaly was a practical operation which might be the means of saving more than one unfortunate child doomed to a most precarious and unfortunate existence. It was, he asserted, a great triumph for French surgery.

Chloroform as an Anæsthetic.

In continuing the discussion at the Academy of Medicine on the effects of chloroform as an anæsthetic, M. Frank observed that the action of chloroform at the commencement of its absorption was manifested by the excitation *en masse* of the nervous centres. His conclusions may be thus summarised: 1. Against the respiratory and cardiac failure arising from reflex action, and which could not be prevented in the initial stage of chloroformisation, artificial respiration by external manipulation, energetically practised without delay, might produce the same result as pulmonary insufflation. 2. Against the respiratory failure alone, more so when that is followed by the cardiac failure caused by chloroform intoxication, pulmonary insufflation associated with rhythmical pressure of the thorax should be at once practised. Dr. Le Fort, who took part in the discussion, said that he could not deny that the applications of physiology to medicine and surgery were numerous; but if there was one case in which it was more difficult than another to apply inferences to man drawn from experiments performed on animals, it was certainly that of chloroformisation. Moreover, it was known that the death of a dog from chloroform easily took place, whereas in man it was comparatively rare.

The Urine during Pregnancy.

Professor Tarnier communicated at the same meeting the conclusions of a work by Drs. Laulanié and Chambrelent on the considerable diminution of the toxicity of the urine of pregnant women, particularly towards the end of their gestation. This toxicity is far inferior to that of normal urine, as established by Professor Bouchard. In two experiments out of ten the urine of pregnant women was atoxic. The authors therefore conclude that the organism of a woman towards the end of her pregnancy retains the toxic substances ordinarily eliminated by the urine.

Enucleation of the Eyeball avoided.

In a note by Dr. Galezowski, the well-known ophthalmologist, the author expressed it as his opinion that it was possible to avoid the enucleation of the globe of a lost eye and to leave it in the orbit, at the same time avoiding the dangers of sympathetic ophthalmia. He realises this by suppressing all the anatomical relations of the diseased eye. The operation is performed in the following manner: He incises the conjunctiva and the capsule, draws forward the globe of the eye, partially divides the optic nerve, and excises all the nerves and the vessels which surround the eyeball, leaving all the muscles intact, and the operation is terminated by reuniting the conjunctiva. In a case thus treated the result has been excellent.

The Anthropometry of "Eyraud."

To complete the inquiry concerning the man Eyraud, who is accused of the murder of a bailiff, the accused has been sent to the Anthropometrical Office at the Prefecture of the Seine, where he was photographed and the following measurements were taken: Height, 1 metre 66 centimetres, which is the medium height of Frenchmen; length of the arms stretched out as on a cross, 1 metre 73 centimetres (his arms are therefore longer than his height); length of the head, 192 millimetres; width of the head, 166 millimetres (Eyraud belongs to the category of brachycephalics); ears, 61 millimetres (the ears are therefore small, but deviated); feet, 264 millimetres, consequently rather large; the hand—middle finger, 115 millimetres (middle sized); the little finger, 91 millimetres; length of the forearms, 448 millimetres (medium length). The length of the arms, stretched out as above described, is due to the extraordinary width of the chest and shoulders, as the forearms alone are of medium length. The inner margin of the iris is orange, the periphery slate-coloured. He has certain marks on the body of no professional interest. He is about forty-five years of age, and strongly built.

Dr. Lejars, prosector at the Faculty of Medicine of Paris, has been charged with a mission to Switzerland and to Germany for the purpose of studying the arrangements for surgical teaching there. Dr. Teissier, hospital physician, has been sent on a mission to Russia with the view of studying the causes of influenza. Dr. Delvaille has gone to Spain to study questions relative to physical exercises, games, and the hygiene of schools, at the instance of the French Government.

Paris, July 15th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Samoans measured by Virchow.

PROFESSOR VIRCHOW and his assistant, Dr. Hansemann, recently measured some Samoans who were being exhibited at Charlottenburg, with a special view to testing the purity of the race. Remarkable uniformity of structure and variety of complexion were observed. Virchow found the tattooing on

their bodies highly artistic, and the noble, almost Caucasian, form of their chieftain's head excited his keenest interest. The head of another of the islanders, named Letungaif, indicated the highest intelligence. The Professor summed up his observations thus: "The people are excellent representatives of the race, and at the same time distinguished by harmonious development. The observation of their manners and gestures is of great psychological interest."

Successful Removal of a Tumour in the Brain.

At a recent meeting of the Berlin Medical Society Dr. H. Oppenheim described an operation of this kind. The patient was a woman aged thirty-six. She had enjoyed excellent health till last September, when she began to suffer from clonic spasms in the temporal region and in the left arm, and frequently fell into convulsions. On recovering consciousness she complained of pain in the right temporal region. The symptoms recurred, and a diminution of the sensibility of the left arm and side set in. The diagnosis pointed to a growth in the brain. As internal treatment only made the patient's condition worse, and the left foot also became rigid, the skull was opened on April 26th, under antiseptic precautions, and the surgeons removed a tumour about the size of a crown-piece. The patient has felt decidedly better since the operation. She can move the left arm and foot without difficulty, and can walk about.

Professor von Nussbaum.

A Munich paper of a recent date writes: "The partial and temporary release of the great surgeon from his official functions has been much discussed here of late and in very various ways. We are able most emphatically to state that the Rector of the University went to Dr. von Nussbaum last week in obedience to instructions from the highest quarter, and informed him that, in answer to his request of Aug. 6th, a temporary substitution has been granted for his clinical and operative courses, but that he would be expected to continue his lectures on surgery and the science of operations himself."

The New German Pharmacopœia.

The new German Pharmacopœia, which will come into force next New Year's Day, will contain fifty drugs not included in the current work—such as antipyrin, condurango wine, gutta-percha, naphthaline, naphthol, phenacetin, salol, and sulphonal. For eighteen of these formulæ are given. Fifty-eight of the drugs contained in the present pharmacopœia will not be found in the new one. One of these is quinine wine.

The Anatomical Society.

The Anatomical Society will hold its annual meeting this year from Aug. 5th to 9th, and will sit with the anatomical department of the International Medical Congress here. The cerebral convolutions, nucleus and cell segmentations, and the development and connexion of the nerve-elements, will be among the subjects of discussion. Professors Sir William Turner of Edinburgh, Waldeyer of Berlin, Van Beneden of Liége, Flemming of Kiel, and His of Leipsic have undertaken to deliver the introductory reports.

The International Cremation Congress.

The International Cremation Congress will meet in the Town Hall here on Aug. 4th. Fifty or sixty foreign delegates are expected, and many medical men have promised to be present. In the name of the Cremation Society the committee of the Congress will take part in the exhibition of the International Medical Congress, and show the ashes of a man of sixty-two cremated at Gotha and those of a girl of nineteen, a metal urn, two urns of serpentine stone, a marble urn, drawings and plans of crematoria, publications from the Society's library, &c. At the meeting of the Cremation Congress in the Concert House on Aug. 5th, Dr. Robert Newman of New York will lecture on the New York Morgue. Tickets for non-members are to be had at No. 5, Breite-strasse.

The International Medical Congress.

The Secretary of the Treasury of the United States has charged Surgeon-General Hamilton to attend the Berlin Medical Congress. The Surgeon-General is also to visit all the European emigration ports, and to report on the hygienic measures taken there on behalf of the emigrants.

Westphal's Successor.

I reported some time ago that the Bavarian alienist Professor Grashey was to be Westphal's successor in Berlin. This, however, turns out to have been an error; Professor Friedrich Jolly is the man. He was born at Heidelberg in 1844, studied at Göttingen and Munich, and graduated in 1867. He began his clinical work as assistant-physician in the General Hospital in Munich, whence he went in the same capacity to the famous Julius Hospital at Würzburg. He taught mental therapeutics at the University of Strasburg from 1873 onwards. He had already made his mark as a literary physician six years or so before. The first fruit of his pen was a contribution to the knowledge of the ganglion cells of the spinal cord. This was followed by studies made jointly with Franz Riegel (now of Giessen) on the distribution of the bloodvessels in the pia mater. He treated a kindred topic—compression of the brain and the movement of the blood in the skull—in 1871. The themes of the most important of his later publications are chronic forms of insanity without organic change among soldiers, deceptions of hearing, Bright's disease in relation to mental disease, multiple sclerosis of the brain, &c. Most of his writings have appeared in periodicals; only "Hysterics and Hypochondria" and his investigations of the electric resistance to conduction of the human body were published separately. His predecessors in his new office as Professor of Mental and Nervous Diseases in Berlin were Ernst Harn, Ideler, Ludwig Meyer, Wilhelm Griesinger, and Westphal.

Berlin.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Toronto University.

THE exercises in connexion with Commencement Day were held in a large marquee on University Lawn, on Tuesday, June 10th. The gathering was an unusually large one, some hundreds having to stand outside the protection of the capacious canvas. The Chancellor, Hon. Edward Blake, M.P., upon whom the degree LL.D. (*honoris causâ*) was conferred, delivered a lengthy and eloquent address. Briefly he reviewed the rapid progress made, evidenced by the increase in the class lists; regretful reference was also made to the large number who failed wholly or partially in pass subjects, and as a means to secure more regular term work exercises and catechetical tests were suggested, the results of which will influence examination marks; a warning was given against the increasing tendency of specialisation, leading to exclusive concentration on a specialty, to the detriment of general learning, and a competent acquaintance with the noble English tongue was urged upon the students. From a lengthy reference to the restoration of the University buildings I glean the following: A sum of 250,000 dollars is to be spent in reconstruction, being provided for by the insurance and legislative grant. The remaining wants were four in number. 1. The books (value of those lost 150,000 dollars): to set off this there has been received the sum from insurance, donations of books and contributions of money, leaving a deficiency of 30,000 dollars. 2. A library with suitable fireproof room and convenient study rooms would cost about 60,000 dollars. 3. A "physical centre" (the gymnasium), which could at present be used for Convocation Hall, at a cost of 25,000 dollars. 4. Convocation Hall, costing, say, 60,000 dollars. The Chancellor stated that to provide the above additional aid would be required to the amount of 100,000 dollars, and he appealed to the generosity of Toronto's citizens and the public generally for a speedy providing of this sum, thus enabling the good work to go on.—The M.D. degree was conferred upon seven candidates, that of M.B. on forty-two, while twenty-nine received that of D.D.S.

Ontario Medical Society.

The tenth annual meeting of the Ontario Medical Association was held in the College of Physicians and Surgeons, Toronto, June 11th and 12th. Nearly 250 members were present, the largest gathering since its inception. The President, Dr. J. A. Temple (Toronto), in his annual address entered a strong plea in favour of a uniform licence for the Dominion, and regretted no change had taken place during the year past in the subject of registration as between Ontario and Great Britain. A brief review of "the etiology of the so-called puerperal fever and the best method of preventing rather than of curing the dread complaint" closed a most interesting and able address.

The Association was honoured with the presence of Drs. T. A. Emmet and Andrew Smith of New York, each of whom read valuable papers. Well chosen and practical papers were read in the different sections, provoking considerable discussion. Dr. Walter H. Moorehouse (London, Ontario) was installed president for 1891. The Association elected four honorary members, one of whom was William J. Mickle, M.B. Tor., M.R.C.P. Lond., of London, England.

Fire at the Longue Pointe Asylum.

The finding of the coroner's jury as regards the fire at this asylum is that either an inmate set the place on fire, or that spontaneous combustion occurred in the sawdust beneath the floor. They recommend that the ventilators in such institutions should be constructed of brick or fireproof material; that such institutions should have fewer storeys, and each building be isolated; violent and infirm patients should be placed in lower storeys; galleries ought to be placed on each storey, and be in communication with a main stairway. The amended list of lives lost places the number of those who perished in the flames at eighty.

The Council of the College of Physicians and Surgeons of Ontario are at present in session in this city. Dr. V. H. Moore (Brockville) has been elected to the office of president.

Toronto.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Kasr-el-Aini Hospital.

MORE than a hundred surgical operations now take place every month in the theatre of the native hospital here. Mr. Milton has recently within four weeks done thirty-four, including a lithotomy, an excision of shoulder, an ovariotomy for double ovarian tumour, and three abdominal sections; while the two native professors of surgery have operated upon thirty-one cases, mostly of lupus, necrosis, and excision of lymphatic glands. During the same month twenty-seven ophthalmic operations of various sorts have been done by the native professor, and an equal number by his English colleague. In addition to the operations there are many cases in the wards of clinical interest, some fifty surgical beds now comprising cases of cervical, axillary, and inguinal glands operated on or awaiting operation; two cases of ruptured perineum (one of which is in a girl only twelve years old, who was only one month married, and is now found to have a congenital absence of uterus); several patients among the blacks with necrosis, a girl whose mastoid process has been trephined, two young women with angular spinal curvature, syphilis in all its stages (quickly yielding, though perhaps only for a time, to mercurial injections in the buttock), harelip, lupus, ventral hernia successfully operated on, excision of knee, chronic tetanus, amputation at shoulder-joint, empyema operated on by the thermo-cautery instead of knife and saw, fibroid uterus, cancer of uterus, a patient brought in for the sloughing bedsores of paraplegia, Guinea-worm blacks, &c. For convenience sake there is also safe in the female wards Abdullah, the infant son of Wady-el-Njumi, who fell, pierced by nine Egyptian bullets, at Toski last August; he is attended by two black slaves from Kordofan, one of whom has, until lately, been his wet nurse. If we look at the bed-tickets of fifty cases rather at random in the medical wards, we find again plenty to interest the students and food for clinical teaching. Phthisis is predominant, not among the natives of Egypt, but among the black Soudanese, the dark-brown Abyssinians, and Arabs, who find Cairo a foreign climate of deadly cold and damp compared to their southern homes. There are now cases of locomotor ataxy, anæmia, hemiplegia, heart disease, diabetes, spastic paraplegia, and melancholia from hasheesh smoking, paralysis agitans, bronchitis, acute pneumonia, typhus (in a separate ward to themselves), subacute rheumatism, abscess of liver, asthma, ascites, and obscure cases of malarial poisoning from the unhealthy districts. The students take notes of their cases in Arabic, but one ambitious youth begged the other day to write his statement of a patient in English, and this is the chief part of what he wrote concerning a negro soldier suffering from phthisis:—"Antecedents of the patient: When young he fell on his lumbar region. Then he was attacked by the small-pox. Since eight months he got pleurisy, and after staying in the hospital for three weeks, during which he has put two vesicatories on the two sides of his breast, he went to Tourah on duty. External appearance: He is a long one, of black colour, thin, inhabiting Tourah, near stagnant streams of water. He is married, his wife is healthy, no children. Urinary apparatus: He feels burning pains in his kidneys which could make him weep, and these pains increase with pressure. There is the trace of external bleeding in this region. Urine 1020, one-eighth of albumen; natural colour; little precipitate; no sugar; reddens the blue litmus paper. Digestive apparatus: No appetite; the tongue scarcely white; the largeness of the liver is of 25 centimetres; the sonority of the stomach is unapprehended because of the liver; pains on touching the liver's anterior and inferior border; spleen is of 13 centimetres in length, and is very painful; no vomiting; constipation. Respiratory apparatus: Natural sonority; great sonority of sounds in the superior and posterior part of the left side, and also rough and tubular respiration in this part; left pleurisy; no cough, and no spitting. Circulatory apparatus natural; pulse filiform and quick. Nervous system natural. General state: On evening he feels cold, then he becomes warm; much of sweat while sleeping."

THE SERVICES.

HONORARY MILITARY RANK FOR MEDICAL OFFICERS.—Surgeon-General O'Nial asks us to publish the following statement:—Sir Redvers Buller having made before the War Office Committee, presided over by Lord Camperdown, a statement that a medical officer (meaning Surgeon-General O'Nial) had, in the Egyptian expedition for the relief of Khartoum, refused a camel on the ground that it was "not good enough for a major-general," and having brought this forward as an instance of the evils of honorary military rank for medical officers, has had his attention called to the fact that this statement was totally without foundation. He has now expressed to Surgeon-General O'Nial his regret that he should have given currency to "an idle story," which he now knows to be without foundation in fact, and he authorises the publication of his entire withdrawal and regret.

ARMY MEDICAL STAFF.—Surgeon-Major John Henry Hughes, M.D. (ranking as Lieutenant-Colonel), to be Brigade Surgeon, vice F. Howard, M.D., placed on temporary half pay (dated June 6th, 1890). The undermentioned Surgeons-Major retire upon retired pay: Alexander Minto, M.B. (dated July 16th, 1890), and George Hare (dated July 16th, 1890).

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon-Major Thomas Partridge resigns his commission (dated July 16th, 1890).

ADMIRALTY.—Staff Surgeon William Brown has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet (dated July 8th, 1890).

The following appointments have been made:—Staff Surgeon Samuel W. Vasey to the *Cormorant*, additional (dated July 16th, 1890). Surgeons: John Moore, M.D., to the *Cambridge*, Henry E. South to the *Britannia*, and John D. Hughes to the *Ganges*, temporarily (all dated July 12th, 1890).

VOLUNTEER CORPS.—*Rifle:* 1st Battalion, the Buffs (East Kent Regiment): Richard Bevan, Gent., to be Acting Surgeon (dated July 12th, 1890).—1st Battalion, the King's Own (Yorkshire Light Infantry): Surgeon A. R. Steel resigns his commission (dated July 12th, 1890).—21st Middlesex (the Finsbury): Acting Surgeon P. P. Langford resigns his appointment (dated July 12th, 1890).—*Artillery:* 2nd Glamorganshire: Surgeon-Major C. T. Vachell M.D., to be Surgeon; P. R. Griffiths, M.B., and A. Hood, M.B, to be Acting Surgeons.—1st Monmouthshire: J. T. Thomas to be Surgeon.

GRATUITIES FOR EXTRA MEDICAL SERVICES.—With the approval of the Local Government Board, the Hertford board of guardians have awarded a sum of six guineas each to Mr. Thomas Odell, Dr. A. H. Boucher, Mr. H. B. Hodges, and Mr. G. Smith Ward, in recognition of the extra services rendered during the recent epidemics of influenza and measles in their several districts.

Obituary.

W. KITCHEN PARKER, F.R.S., M.R.C.S.ENG., L.S.A.

WE have already briefly indicated our estimate of the character and genius of Mr. W. Kitchen Parker. It would be somewhat foreign to our purpose to estimate rightly his work in biology and his place among the contemporaries of Darwin. It is more congenial to us to trace his history as a medical practitioner and as a man. Mr. Parker was born in 1823 at Dogsthorpe, about four miles from Peterborough in Northamptonshire. His father was a farmer, and it may well be that the farm life he was born to supplied material for gratifying his first anatomical and botanical curiosity. His schools were three: a dame's school in Dogsthorpe, a small private school at Werrington, near Peterborough, and the Peterborough Grammar School, head master, Rev. Wm. Cape. He left school at the age of fifteen, and went as an apprentice to Mr. Woodruffe, a chemist, at Stamford, where he stayed three years. At this time he used to get up at four in the morning and botanise till seven. After this he went as apprentice to Mr. Costal, a general practitioner at Market Overton, in Rutlandshire. In December, 1844, he left Market Overton and came up to King's College, London. Here he became Demonstrator in Physiology to Sir William Bowman and Dr. Todd. Either before or after this period he studied at Charing-cross Hospital, and in due time qualified as L.S.A. Thereafter he commenced practice in Tachbrook-street. As is so often the case with men that do much work, he was not physically strong. During the whole of his life he had very indifferent health, beginning in infancy with dysenteric diarrhœa. After beginning practice he had an attack of English cholera. About fourteen years ago he was laid up with an abscess in the cheek, and for some time his life was despaired of. A near relative, to whom we are indebted for these particulars, thinks he would have been a chronic invalid but for his immense energy, and his underlying hopefulness and faith—the true sources of his splendid enthusiasm. He had great power of concentration. He could read abstruse books while walking along the Strand on his way to King's College, and could think out scientific problems in the streets or in trains. He had a remarkable memory, especially for scientific names, for the Bible, and for Shakespeare. As a young man he read Howe's theological works and also Bishop Berkeley's works. His imagination was as vivid as his memory. He remained to the last one of the devoutest of men, full of faith, hope, and charity. In spite of all his work as an investigator he read much, devouring three volumes a week from Mudie's. He was intensely fond of botany. As a boy, he used to keep pets—a barn owl, a heron, ferrets, and rabbits. He had a quick eye for birds, and knew their characteristic flight and mode of walking. His work in anatomy and morphology will be best gathered from a glance at the list of his papers given in the Medical Directory. For well-nigh twenty-five years he was contented with the title of L.S.A. At his death he was the Fellow of half a dozen scientific bodies, who regarded him as one of their most valued and original workers. His life was simple. The part played in it by education was secondary to the working of his own genius, which was one of the most interesting and original of a generation that has been fruitful in such creations.

JOHN RALFS, L.S.A.

WE regret to announce the death of Mr. John Ralfs, the veteran botanist, which occurred at Penzance on the 14th inst. Mr. Ralfs was the second son of the late Mr. Samuel Ralfs, of Munddiford, Christchurch, and was born on Sept. 13th, 1807. He was educated privately at Bishops Waltham and Romsey, and articled to a surgeon at Southampton. He subsequently became a pupil at the Winchester Hospital. In 1832 he passed his final examination, and was specially commended by the presiding examiner for the intimate knowledge of the science of botany which his answers displayed. For a short time Mr. Ralfs practised as a surgeon in Shoreditch, but soon after he took up his residence at Torquay. He went to Penzance in 1837, and resided there till his death, but did not practise his profession. He has long been known as one of the most distinguished of English botanists, and was in constant correspondence with experts in this branch of science, not only in England, but in America and the principal European countries. He was the author of many important works, including "The British Desmidiaceæ," and "The Flora of West Cornwall." At the time of his death Mr. Ralfs was a member of the Penzance Library Committee, a position which he had held during the greater part of the time covered by his residence in Penzance. He was also a member of the Penzance Natural History and Antiquarian Society, the transactions of which contain not a few important papers from his pen. Last year he was elected Honorary Fellow of the Royal Microscopic Society of Great Britain.

DR. GIUSEPPE BUONOMO.

THIS eminent physician and hygienist died suddenly on the night of the 7th inst., in Rome, where he was temporarily residing to discharge his duties as a member of Parliament. He had been all day in the Chamber of Deputies, taking the intelligent and useful part which was his wont in the business of the House, and on its rising had dined with a few friends at the *café* he was in the habit of frequenting. He had been unusually bright and cheerful all the evening, and had retired to rest seemingly as well as ever he was, when a summons came from his bedroom to bring medical assistance immediately. This was done, and he was found prostrated with an apoplectic stroke. Consciousness soon returned, with the prompt means put in practice by his skilled attendants; but, while thanking them for what they had done, he assured them that he was without hope of recovery. This presentiment proved but too well founded, and the recurring attack he dreaded carried him off a few hours later.

A Neapolitan by birth and education, he distinguished himself at the university of his native city, and settled down to active research, first in the domain of physiology, and afterwards in that of public health. His talent for affairs and for the discussion of measures affecting the commonweal led to his gaining a seat in Parliament for the constituency of Gaeta, and afterwards for that of Caserta, which he represented till the day of his death. He belonged to the Left Centre, and, as one of the most able and experienced of that political group, he enjoyed the friendship and confidence of the late Signor Depretis, of whom he was a steady supporter. His chief work lay in sanitary legislation, to which he brought medical accomplishments of unusual depth and extent, as well as a mind singularly open to every enlightened suggestion, from whatsoever quarter it came. The recently enacted sanitary code owes, perhaps, more to him than to any other Italian legislator, always excepting its great author, Dr. Bertani.

Dr. Buonomo had just assumed, as we lately announced, the direction of the Casa di Salute at Castel Gandolfo on the Alban Hills, some ten miles from Rome, and a long and useful career, divided between that office and his parliamentary duties, seemed in store for him when the fatal attack above mentioned cut him off in his fifty-second year. He held a prominent place both in the profession and in the Chamber of Deputies, in which some years before he had been elected a vice-president, while his published writings, particularly his official reports, will long continue to be read and cited by successors in the posts he so honourably filled. The Chamber gave marked expression to its sense of the loss it had sustained by his premature death, and the public funeral it gave him attested by the number and the character of the mourners how few were the scientific bodies that did not share its feelings.

GIOVANNI BATTISTA COLPI.

GARIBALDI'S famous expedition of the "Thousand" contained more representatives of the medical than of any other profession, but of these, since their first landing in Sicily thirty years ago, death has reduced the number to all but a few survivors. The able and accomplished practitioner whose name is given above is the latest addition of these to "the majority," an announcement having reached us from Padua that he died at Saletta, in its neighbourhood, on the 29th ult.

A Paduan by birth and a distinguished student in its

medical school, young Colpi had barely graduated when the bugle call of the revolution drew him from the threshold of practice to fight for his country's unity and independence. When only twenty-two years of age he enrolled in Garibaldi's "Thousand," and all through that memorable campaign he served in a combatant as well as in a medical capacity with a fearlessness and effect that won for him the distinction he most dearly prized—the honourable notice of the General. Again, in 1866 when Austria had to be driven out of his native Venetia, Dr. Colpi responded with alacrity to Garibaldi's appeal to the "gioventù Italiana," and, leaving the professional work on which he had entered, put his services both medical and military once more at his country's command. In the short campaign, the chief incident of which was the sharp engagement at Bezzecca, he gave further proof of his intrepidity and coolness under fire, and when Venice, with its component provinces, at length formed part of United Italy, he returned to his rural practice at Saletta, never again to abandon it. There he owned a small estate which enabled him to add to his professional work an amount of charity among the poor which earned him the gratitude of the whole commune. He was contented with the honours he had achieved and the competency he had inherited, while his daily practice supplied the intellectual stimulus that keeps the mind from rusting. He died in his fifty-third year.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen have passed the Second Examination of the Board in the subjects indicated at a meeting of the Examiners on the 9th inst.:—

Anatomy and Physiology.—William F. Peacock and Francis P. Piper, students of St. Mary's Hospital; Charles W. Moorshead, Leonard A. Parry, and Vaughan Pendred, of Guy's Hospital; Algernon F. Stevens and Reginald C. J. Stevens, of St. Bartholomew's Hospital; George W. Damman and Edmund J. Gleeson, of Melbourne University; Jacob Snowman, Edward Williams, and Ernest M. Wyche, of London Hospital; Cyril Wace, of King's College.

Anatomy only.—Francis Whitelaw, of St. Mary's Hospital.

Physiology only.—George A. Skinner, Gerard E. Lockyer, and Doveton A. Martin, of Guy's Hospital; H. De Stepaniau and Thomas Smith, of London Hospital; Frederick P. Rose, of London Hospital and Mr. Cooke's School of Anatomy and Physiology.

Passed on the 10th inst.:—

Physiology only.—Frank P. Bush, John O. Williams, Frederick A. Robinson, and John J. E. Biggs, of Guy's Hospital; Chas. J. Harrison, of University College; Ernest E. Elliot, Samuel E. Gill, Allan L. Saunders, and Edgar Kennington, of St. Bartholomew's Hospital; Henry W. Hull, Jan. G. Scheurer, Redmond M. Russell, and Arthur H. Turner, of London Hospital; Erskin H. Worth, of St. Thomas's Hospital; Henry B. Ellerton and Joseph C. S. Matthews, of St. Mary's Hospital; Benjamin W. Swenden and Arthur E. Weston, of St. George's Hospital; Henry S. Nicholls, of Middlesex Hospital; Edward A. Rogers, of King's College.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the July sittings of the Board of Examiners in Public Health, out of six candidates the following gentlemen passed the necessary examinations, and were admitted diplomates in Public Health:—

M. S. Anderson, M.A., M.D., Glengarnock, Ayrshire; Jas. Harrison, M.D., North Shields; James Milroy, L.R.C.P. Edin. &c., Kilbirnie; James Maxtone Thom, M.B., Crieff.

ROYAL UNIVERSITY IN IRELAND.—The following gentlemen have passed the First Examination in Medicine of the University:—

Upper Pass Division.—R. H. Allan, M. Burke, Joseph Corbett, R. A. Cunningham, Francis Gallagher, Joseph Matson, Martin Moran, Jeremiah Reddy, A. W. Spence, A. Tolpatt.

(All the above may present themselves for the Honours Examination.)

Pass.—J. C. Adams, D. Barry, J. A. Byers, Alfred Caldwell, L. A. Crinion, James Cunningham, Wm. J. Dargan, R. T. Dunlevy, Robert Fuhr, Walter Herron, Thomas Johnston, Joseph Lowry, John McBurney, C. McCarthy, Denis McCarthy, Joseph McGrath, Robert MacKeown, Daniel Mangan, Douglas Moore, James Munce, Jeremiah O'Callaghan, M. O'Dea, David O'Donnell, Edmond O'Shaughnessy, Andrew Quirke, Joseph Rountree, Michael Ryan, J. Sheehan, and Andrew Trimble.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following gentlemen, having passed the necessary examination, have been granted the diploma in Public Health of the College:—

William John Harnett, F.R.C.P. Edin. 1887, L.R.C.S. Irel. 1865; and Thomas William Kyle, M.D. 1875, M.Ch. 1876, Queen's Univ., Irel.

MEDICAL MAGISTRATE.—William Robinson Hill, M.D. Edin., has been placed on the Commission of the Peace for the borough of Lymington, Hants.

HOSPITAL SATURDAY.—The result of the collection last Saturday, in the metropolitan central district, amounted to £2500, against £1800 received last year.

THE LATE MR. G. C. JONSON.—It is proposed to place a bust or medallion of the late Mr. Jonson in the chapel or schoolroom of Epsom College, with an inscriptive tablet, which shall record his zeal in the interests both of the College and the Medical Benevolent Fund; and, in some slight measure, mark the gratitude of those by whom his memory will always be held in esteem. Subscriptions, which are limited to two guineas, may be sent to Sir James Paget, Bart., chairman of the committee, or to the secretary, payable to the account of the Jonson Memorial Fund, at the Western Branch of the Bank of England.

PHYSICAL EDUCATION.—The Earl of Meath has introduced a Bill for the promotion of physical education in elementary schools. He proposes to require the school authority for every elementary school in any "populous town" to make fit and proper provision, to the satisfaction of the inspector, for the instruction and practice of all scholars of both sexes in physical education and exercises connected therewith. No school or department of a school is to receive the higher of the two principal grants under section 101 of the New Code unless this requisition be complied with.

BURIAL REFORM.—A meeting in connexion with this subject will be held in Zion College, Victoria Embankment, on Wednesday, July 23rd, at 3.30 P.M., in which many eminent persons will take part. The Rev. F. Lawrence, secretary of the Church of England Burial Reform Association, preaching last Sunday in the Manchester Cathedral, attributed the excessive insurance of infants' lives to the costly and ostentatious displays at funerals at present the custom of this country. He characterised pit burial and burial in vaults as a public scandal. He maintained that the control of burial places should be concentrated in the Local Government Board.

THE NATIONAL REGISTRATION OF QUALIFIED PLUMBERS.—A public meeting will be held at the Town Hall, Kensington, on Wednesday next, at 4 o'clock, under the presidency of the Hon. and Rev. E. Carr Glyn, M.A., to receive a report of the progress which the system of registration has made since it was first established in London in 1886; to consider measures for securing the systematic training and instruction of plumbers' apprentices; and to direct the attention of Parliament and the public generally to the circumstance that there is not at present any safeguard to the public in respect of plumbers, upon whose efficiency the health of the public is largely dependent.

NATIONAL LEPROSY FUND.—A meeting of the executive committee for the National Leprosy Fund was held on Wednesday, at 143, Piccadilly. Baron Ferdinand de Rothschild, M.P., presided, and Mr. Jonathan Hutchinson, Sir J. Fayrer, and Dr. P. Abraham were present, amongst others. It was resolved that the journal of the Investigation Committee should be published at a cheap rate in order that it may be made available for all persons taking an interest in the subject. A letter from the Viceroy of India, dated May 19th, was submitted, in which his Excellency notified the willingness of the Government of India, in the event of a commission of three members being sent out by the executive committee, to depute two Government officers to coöperate with the commissioners and to bear the cost of this official deputation. After considerable discussion, the hon. secretary was requested to inform the Viceroy that the committee had learnt with much pleasure the intention of the Government of India to take active operations with reference to the question of leprosy, and it was resolved to subscribe £1000 as a contribution from this country to the Indian fund to be inaugurated by his Excellency. The hon. secretary was further instructed to place himself in negotiation with the Royal College of Physicians and the Royal College of Surgeons, with a view to each appointing a commissioner to act with the commissioner to be appointed by the executive committee and the officers to be deputed by the Government of India; an inclusive fee of £650 was allocated for each commissioner to be appointed.

EPSOM COLLEGE.—The celebration of Founder's Day at the College will be held on July 28th, when the distribution of prizes will take place.

THE LATE MR. J. H. RUTHERFORD.—A project is, we learn, on foot in Newcastle and the north of England to raise a sum of £10,000 for the purpose of erecting a "Rutherford Memorial College" as an extension and enlargement of the educational institution founded in Newcastle by the late J. H. Rutherford, L.R.C.P.Ed. It is stated that half of the proposed sum has already been subscribed.

THE EXTENSION OF PECKHAM RYE.—The Parks and Open Spaces Committee of the London County Council have decided to recommend that £18,000 shall be granted towards the purchase of the forty-seven acres which it is proposed to add to Peckham Rye. Should this recommendation be adopted, the promised subscriptions will amount to £50,000—namely, £12,000 by the Charity Commissioners, £18,000 by the County Council, and £20,000 by the Camberwell Vestry, leaving about £1000 to be raised by the local residents.

INFANT LIFE PROTECTION.—The Select Committee of the House of Commons, of which Mr. Stuart-Wortley is chairman, met again on the 11th inst., and took evidence from the secretary of the Charity Organisation Society, who stated that scores of advertisements appeared in the newspapers offering to take children, and he believed that the advertisers lived entirely by that means. He thought that registration should in all cases be made compulsory. Sometimes a lump sum was paid with a child, though occasionally payments were made weekly, in which case the children were well treated. The witness was strongly of opinion that the system of selling children should be put a stop to.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of the directors of the Society was held at 20, Hanover-square, on Wednesday, July 9th, Mr. Tegart, Vice-President, in the chair. One new member was elected, the deaths of four were reported, and two gentlemen had ceased to be members. Fresh applications for relief were read from two widows and four orphans, and grants were made them. It was resolved that a sum of £1387 should be distributed among the sixty-three widows and eighteen orphans receiving assistance from the Society. The expenses of the quarter amounted to £44 15s. 6d.

PADDINGTON RECREATION GROUNDS.—In support of the scheme for the purchase of these excellent grounds for the use of the public their Royal Highnesses the Prince and Princess of Wales paid a visit to them on the 9th inst. Lord Randolph Churchill read an address to the Prince of Wales, in which it was stated that a committee had been formed for the purpose of establishing a recreation ground and polytechnic for north-west London. The grounds contained twenty-one acres, the freehold of which would cost £50,000. Towards this sum contributions to the extent of £6000 had been made. Nine acres are devoted to cricket, two acres to an open air gymnasium for children, four acres to lawn tennis, and the remainder to cycling and running tracks. The scheme is to erect a large central hall, swimming baths, class-rooms, workshops, &c.

MEDICAL DEFENCE UNION: METROPOLITAN DIVISION.—A meeting of the Executive Committee was held at the Euston Hotel on Thursday, July 10th, at 5.15 P.M., Dr. de Havilland Hall in the chair. An important communication from Surgeon-Major Evatt of Quetta was read, advocating certain changes in the Register. A subcommittee, consisting of the chairman, Dr. Bateman, and Dr. Campbell Pope, were appointed to report on the subject. The meeting was followed by an emergency meeting of the General Council of the Union, called to consider the anomaly existing in the metropolitan area, under which, by the Police Act, the receiver for the metropolitan police claimed all fees paid as the result of the successful prosecution of quacks. Mr. Martin, solicitor, explained the matter in detail to the Council, and it was decided that a subcommittee should consider the matter and frame a petition to be presented by a deputation of members to the Home Secretary. At this meeting the chair was taken by Dr. Granville Bantock.

THE HEALTH OF MR. STANLEY.—Surgeon Parke informs the Press Association's correspondent that Mr. H. M. Stanley is getting somewhat stronger and his condition is improving. He is in the very best of spirits, and enjoys rest, which is so essential to his recovery. Mr. Stanley takes carriage exercise every day.

METROPOLITAN WATER-SUPPLY. — At the sitting last week of the committee appointed by the City Corporation to inquire into the supply and charges of the metropolitan water companies, the evidence was taken of Mr. A. Stoneham, assistant secretary to the Board of Trade, and official auditor under the Metropolitan Water Act, 1871; Mr. Deputy G. Walter, Sir W. J. Farrer, Mr. Jabez Hogg, Alderman Phineas Cowan, and Mr. G. Webster. Mr. B. Scott, Chamberlain of the City of London, also supplied a statement showing the financial condition of the eight water companies.

MEDICAL NOTES IN PARLIAMENT.

Infectious Diseases (Notification) Act.

IN the House of Commons, on the 14th inst., in answer to Mr. Bond, Mr. Ritchie said: The Infectious Diseases (Notification) Act, 1889, has been adopted in 481 urban sanitary districts, 337 rural sanitary districts, and 18 port sanitary districts. The Act is in force throughout London, without adoption. Compulsory notification is also in force under local Acts in fifty-six other districts. The population of the districts where there is a system of compulsory notification in force is, according to the census of 1881, 19,316,000, the total population of England and Wales being 25,974,000. I have no special reports on the subject, but I have no doubt whatever that the notification of infectious diseases will have results beneficial to the public health, and I am glad to say that the arrangements have worked to a remarkable degree without friction.

THE HOUSE OF LORDS' COMMITTEE ON HOSPITALS.

On Monday, the 14th inst., this Committee, Lord Sandhurst in the chair, had under examination Mr. Carr Gomm, a former chairman of the House Committee of the London Hospital for many years. The Witness said that the matron had absolute power in engaging probationers, and in the case of suspension she reported to the House Committee, who in every case had confirmed her decisions. The Chairman said it appeared to him that the change of responsibility was not so important as the Committee supposed, because when the case of Miss Page was brought under their notice they knew absolutely nothing about her, except from the reports of the matron at the close of her career. The witness, in reply to the Chairman, stated that no subcommittee existed to inquire into the dismissal of nurses, and even if a minute inquiry had to be made, he never remembered delegating such a case to a subcommittee, and he would not recommend the appointment of such a committee.—The Chairman: Do you think you are in a position to know whether there is necessity for such a thing or not?—The Witness: Yes. The witness stated that a probationer whose engagement was terminated by the matron might, if she chose, appeal to the House Committee; that was a rule which the House Committee approved of, and was thought to be an advantage to the nursing staff.—The Chairman: Are you still satisfied with your system of inquiry into the case of probationers?—The Witness: Yes, we are quite satisfied with the present arrangement. He was not prompted at all to suggest any amendments of the present system. Some questions were asked as to the case of Miss Raymond, of which the witness could not say anything except that she had never appealed to the Committee, and that the Committee made no inquiry about her. The correspondence on this case did not appear in the books of the Committee. Probably she had left the hospital after her services had been dispensed with; if she had done so the Committee would have heard of it.—The Chairman: Yes, and meantime she would be gone. If there had not been a friend in this case, would not a great injustice have been done?—The Witness: No, because at that time she was incompetent, although at the end of a further year's training she learned sufficient to enable her to receive the nurse's qualification.—The Chairman: If your daughter or niece had been in that position would you have been perfectly satisfied?—The Witness: If I found a relative of mine was not well qualified to act as a nurse I should endeavour to take her away as soon as possible.—The Chairman: Yes, but would you not make some inquiry if a charge of general incompetency were made?—The Witness: Yes, I would make some inquiry.—The Chairman: Are you still of opinion that your system is good?—The Witness: I do not see any way by which we could alter it for the better. It would be quite impossible for the Committee to make itself responsible for all the points in connexion with probationers. We leave the matter in the hands of the matron and are satisfied with her management.—The Chairman: As far as I can make out by the system pursued only one side is heard—namely, the side of the matron.—The Witness: Yes, unless the probationers chose to come up.—The Chairman: But the unfortunate probationer is dismissed before she has a chance of coming before the Committee.—The Witness: Yes, I think that is so. But the Committee have decided on leaving the termination of the engagement of the probationers entirely in the hands of the matron, and have never seen any cause whatever to doubt the advisability of that course.

Questions were then asked concerning the complaints made about the food and other things from time to time, and the Chairman suggested that it would be a good plan to keep a register of these complaints, to which course the witness saw no objection. The salary of the house governor was £900 a year, besides a house and his board. The secretary received £400 a year, both of these gentlemen being provided with a staff of clerks. The chaplain received £300, and he had assistants for whom an allowance of £70 a year was made. The scripture reader was paid £50 a year. All these salaries came out of the funds of the hospital. The

witness thought that, taking the whole of the administration, the expenditure would compare favourably with other hospitals.—The Chairman: Has it ever occurred to you to reconsider the construction of your administration.—The Witness: I think that if we were to appoint another house governor we probably should not start him off at a salary of £900 a year. But he considered Mr. Nixon, who had a most intimate knowledge of hospital administration, was not at all too highly paid even at that sum.—In reply to Lord Spencer, the witness thought that probationers were bound to adhere to alterations made in the standing orders even after their engagement.

Lord Cathcart asked whether the witness thought it was not advisable that the matron should dine with the nurses, as was the custom in some of the large endowed hospitals. The Witness stated that the matron's assistant was always present.—Lord Cathcart: Miss Yeatman and Miss Raymond both stated on oath here that complaints were useless. Could there not be a committee of ladies to assist the matron in dealing with these?—The Witness: I have much more faith in a committee of gentlemen.—Lord Cathcart referred to the matron's book as containing statements which should hardly be made in a business record, such, for instance, as one which said that a certain lady was "too free and easy with the male patients," and in the case of another that she was "given to flirting." Such statements would be exceedingly damaging to those ladies' characters if that book got abroad. He asked the witness whether it was so guarded as not to damage these ladies unjustly. The Witness thought it was.—The Chairman: Might it not be better if it was made official, and the entries signed by the chairman?—The Witness: Yes, I think so.

Lord Kimberley asked what was the meaning of saying that there was an appeal to the committee when the witness, on his own evidence, did not regard that body as capable of dealing with the question of the competency of a nurse, and whether the appeal in that case was not an absolute farce. He asked whether it would not be better to let the probationer know that she was subject to have the engagement terminated directly by the matron. The witness preferred that matters should remain as at present, and compared the arrangements at a hospital to those of a private house; but Lord Cathcart pointed out that there was no analogy between the two, as in the one case private affairs were being administered and in the other those of a large public institution, on behalf of which they had to administer public money.—Lord Kimberley was of opinion that the appeal of the probationer to the House Committee was misleading, as it could not possibly be otherwise than a nominal appeal. Evidence was then given in reference to the appointment and ultimate retirement of Mr. Valentine, the chaplain of the hospital, from which it appeared that his views had undergone some change after his appointment, which fact, in the opinion of the House Committee, rendered him less eligible for that position.

Miss Manley, lately a nurse, gave evidence rebutting certain statements made by previous witnesses.

Dr. Wethered had been formerly house physician. He did not think the beds previously spoken of could have been removed without the knowledge of the house physician. He had never known of such an occurrence.

Mr. Brooke, formerly assistant chaplain, gave evidence referring to the case of Nurse Howes.

The Committee then adjourned.

On Thursday the Rev. H. T. Valentine was recalled. He said he had never stated to Mr. Carr Gomm that he should try to injure the London Hospital. What he said was that, on account of the mismanagement of the house committee, he thought that in the interest of the London Hospital the house committee should be reorganised.

Mr. G. Q. Roberts was recalled, and gave a long explanation. The minutes which the Chairman said were in such a muddled condition as to render him unable to understand them.

The Rev. H. T. Valentine complained that the minutes of the hospital had only been submitted in part.

Mrs. Perry said she entered the hospital in 1884 as a staff nurse, and had gradually risen to the position of a surgical sister. Her opinion was that full justice had almost always been done to the nurses. Regarding the allegation that the children were washed sometimes as early as four o'clock in the morning, the witness stated that at that time many children were awake, and some required feeding and other attentions, and she would not object to having these washed. In her opinion the food had improved both in quality and variety while she was there.—Lord Thring: Is it in your opinion not very hard for nurses to work from twelve to fourteen hours each day? Is it or is it not your opinion that that is more than an ordinary woman ought to do?—The Witness: Yes, it she was working all the time. Lord Thring: Would it not be better if more money were expended on the nurses, although, of course, in some degree the number of patients might be rendered comparatively less?—The Witness: Yes. At the same time I think it would be very dangerous to have a great many idle women in the wards.

Dr. Samuel Fenwick, F.R.C.P., had been for twenty-two years connected with the London Hospital, and he thought that the various statements made concerning the treatment of nurses was calculated very much to deceive their lordships. He gave an account of the arrangements which formerly existed at the hospital, and stated that he was now, with his colleague Dr. Sutton, responsible for the health of the nurses, while Mr. Treves attended to the surgical cases. Even trifling ailments like sore-throat, headache, sleeplessness were seen in the nurses' room, examined, and prescribed for. If there was anything requiring them to be laid up from their duties they were put in the sick ward. Whenever a nurse became seriously ill the case was removed. The house physicians or surgeons had no responsibility at all in connexion with the health of the nurses, and it was quite untrue that there was any neglect of the cases. The present average age of the resident staff was twenty-seven, some of whom had degrees of the very highest value. There was at the present moment no one who was not doubly qualified on the staff of the hospital, or anyone who would not do credit to any institution in this country. No private interest was allowed to interfere with the appointment. He thought the present system worked very well indeed, although it seemed to him rather a farce that two consulting physicians should have to examine so many trivial cases.

The Chairman: Do you think it would be better to have a resident medical officer?—The Witness: Very much better indeed; but I offer that merely as my own private opinion. We are very much pressed with bad cases, as the hospital accommodation is insufficient for the district.—The Chairman: And that makes the case in favour of the appointment of a resident medical officer all the stronger.—The Witness: I should think so. I have always been of opinion that in every large hospital it should be a *sine qua non* that there should be an elder person resident, competent to give advice and see cases in the absence of the visiting staff. He believed the patients at the London Hospital were well nursed compared with what obtained when he was a boy of fifteen. Improvements on all points had during the past few years been most rapid. The witness, in answer to Lord Sandhurst, said he was not aware that nurses had menial duties to perform. He thought the working hours of nurses were too long and their time and opportunity for recreation too limited in such a dense part of London. If economy were no object, he would like very much to see the number of nurses and probationers increased, and also the number of holidays, but he feared economy was a great object at the London Hospital. He used to have to reject a considerable number of probationers on account of anæmia, but lately he had scarcely rejected one, a fact which proved the great improvement of the diet.—The Chairman: I suppose nurses cannot be too well fed?—The Witness: I do not think they are likely to be too well fed at general hospitals?—In reply to Lord Monkswell, the witness said that if nurses were to be allowed to consult whom they chose he could not hold himself responsible for them.—In reply to Lord Thring, the witness admitted that the working day of the nurses was far too long, and thought that a greater number of nurses would be beneficial to the hospital if they had proper accommodation for them.—The Chairman: Would you like to see the honorary visiting staff made a paid staff at general hospitals?—The Witness: Very much, indeed.—The Chairman: Are you satisfied with the system of medical education that exists at present?—The Witness: I think it is all wrong. I would like to see the London University become a teaching university, and certain hospitals registered for hospital instruction, and the Viennese system adopted.—In reply to Lord Kimberley, he admitted that the wards were very much overcrowded, a fact which was really due to the want of hospital accommodation in the neighbourhood.—Lord Cathcart: In regard to what has been called the "Martyrdom of Hospital Appointments," is it not the fact that such appointments form the ladder by which medical men climb to fame, and that that to a large extent is the view of your profession?—The Witness: That is quite probable. If you could pay a man and select him, as is done abroad, it would be better, but that, I think, is out of the question here.

Mr. Frederick Treves, F.R.C.S., Surgeon to the London Hospital, with which he had been connected for nineteen years, gave evidence rebutting most of the charges and allegations made against the hospital, which he characterised as unjust. In his opinion little advantage would be obtained by the appointment of a resident medical officer. Medical education might suffer from such a step, and it would lessen the number of hospital appointments. The work of nurses was obviously hard, and he thought many women attempting the work were totally unfit for that or any other kind of moderately hard work. Regarding the occurrence of so many cases of "flat-foot" among nurses, he explained that many of the probationers were ladies not much accustomed to walking or standing; they were of feeble physique, and accustomed to wear a rigid boot or shoe; under these circumstances, much standing or walking caused the ligaments of the arch of the foot to give way. He would like nurses to have a month's holiday, and he considered that, as a body, the nurses of the London Hospital were exceptionally efficient. On the whole, he thought the state of things existing at the London Hospital was fairly satisfactory. In reply to Lord Thring, the witness said he thought the registration of nurses was a system which would be injurious to the body of nurses, to the public, and to medical men, inasmuch as it would place all so-called trained nurses on one level. It would be a register of the minimum qualifications of nurses.—Lord Kimberley: Does that differ from the registration of a minimum qualification of a medical man?—The Witness: In no way.—Lord Kimberley: It seems to me the whole thing depends upon the society really discharging the duty of discrimination. In conclusion, Mr. Treves observed that the matron had been in many respects exceptionally considerate in her treatment of the nurses, and was remarkably popular among them. It had been stated that the matron had been in some instances tyrannical and arbitrary, but that was practically impossible, inasmuch as every nurse had the power of appeal to the members of the staff. The medical officers had been spoken of as if they were mere boys; and it was only fair to them to say that they were the pick of the students, and the very best men the College could produce.

The Committee then adjourned.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on July 15th, 1890.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever	Other diseases.	Total.	
Eastern Hospital	279	31	—	20	..	330	442
North-Western Hospital	208	40	—	2	..	250	415
Western "	137	12	—	7	3	159	202
South-Western "	125	..	..	..	1	126	340
South-Eastern "	173	17	3	14	3	210	462
Northern "	369	24	..	6	..	399	480
Totals	1291	124	3	49	7	1474	2402

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BONSALL, G. R. E., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Aberystwith District and the Workhouse of the Aberystwith Union, vice Williams, resigned.

BRAND, G. H., L.M.S., L.S.A. Lond., has been appointed Assistant Medical Officer to the Loughborough Medical Aid Association.

COLLINS, W. C. G., M.D., Aberd., M.R.C.S., has been appointed Medical Officer for the Wells District of the Frome Union.

DODD, HENRY WORK, F.R.C.S., has been appointed Assistant Surgeon to the Royal Free Hospital.

DOYLE, A. A., L.K.Q.C.P., L.R.C.S.Irel., has been appointed Surgeon to the Cooktown Hospital, Queensland.

ELLIS, H. A., M.B., B.S.Dub., has been appointed an Honorary Medical Officer at the Sydney Hospital, New South Wales.

FRASER, JOHN J., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health for the Borough of Clitheroe.

FULTON, THOMAS K. J., L.R.C.P., L.R.C.S. Edin., has been appointed Health Officer and Medical Officer to the Police, Gaols, and Paupers for Devonport and neighbourhood, Tasmania.

GARDEN, ROBERT J., M.D. Aberd., has been appointed Second Visiting Surgeon to the Royal Infirmary, Aberdeen, vice Will, retired.

HALL, J. G., M.D. Aberd., has been appointed Third Visiting Surgeon to the Royal Infirmary, Aberdeen, vice Garden.

HAMILL, J. WILSON, M.D., M.Ch. Queen's Univ., has been appointed Physician to the Grove Retreat for Inebriate Women, Fallowfield, Manchester.

HARRISON, J. A., M.D. Glasg., has been appointed Medical Officer of Health for the Haslingden Urban Sanitary District of the Haslingden Union.

HAWTHORNE, A. W., M.D. Univ. Irel., has been appointed Surgeon to the local Hospital, Carcoar, New South Wales, vice Kelty, resigned.

HINDHAUGH, JAMES, M.B., B.S., L.S.Sc. Durh., has been appointed House Surgeon to the Royal Infirmary, Newcastle-on-Tyne.

HOLLINGS, EDWIN, M.D. St. And., has been appointed Surgeon to the London and North-Western Railway Company, vice Herbert Page, resigned.

HOLLINGSWORTH, J. MCKEE, L.K.Q.C.P.I., has been appointed Medical Officer for the Stebbing District of the Dunmow Union.

JONES, S. B., M.B., C.M. Edin., has been appointed Medical Officer of Health for the Rural Sanitary District of the Gower Union, vice Ellis.

JONES, THOMAS, L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Western District of the Bridgend and Cowbridge Union, vice James resigned.

KEIFFENHEIM, L. W., M.B., B.S. Durh., M.R.C.S., L.R.C.P., has been appointed Resident Clinical Assistant to the South-Western Fever Hospital, Stockwell (Metropolitan Asylums Board).

KENNEDY, JOHN W., F.R.C.S., M.K.Q.C.P.I., has been appointed Visiting Surgeon to the Gaol at Hay, also Government Medical Officer and Vaccinator for the District at Hay, New South Wales, vice Casey, resigned.

KENRICK, J. H., L.F.P.S. Glasg., has been appointed Medical Officer for the Coleford District of the Frome Union.

KIMPSTER, THOMAS MORLAND, M.B., B.S. Durh., has been appointed Junior House Physician to the Royal Infirmary, Newcastle-on-Tyne.

MACINDOE, ALEXANDER, M.D. Glasg., has been appointed Medical Officer for the Whitmore District of the Newcastle-under-Lyne Union.

MCQUAID, M. J., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Cootehill Dispensary District, co. Cavan.

MELLER, C. B., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health for the Cowbridge Urban Sanitary District, Bridgend and Cowbridge Union.

MACDONALD, G. B. D., M.B. Aberd., has been appointed Junior Medical Officer to the Hospitals for the Insane of the Colony of Victoria.

RODEN, PERCY, M.B., C.M. Aberd., has been appointed Medical Officer for the Hanbury District of the Droitwich Union.

ROUGHTON, E. W., M.D. Lond., F.R.C.S., has been appointed Registrar to the Royal Free Hospital.

RUTTER, JOSEPH, M.B., C.M. Edin., has been appointed Honorary Surgeon to the Prudhoe Convalescent Home, Whitley, vice I'Anson, resigned.

SCOTT, HENRY JAMES H., L.R.C.P. Lond., M.R.C.S., has been appointed Government Medical Officer and Vaccinator for the District of Scone, New South Wales.

SHAW, RAYMOND HENRY, M.B., B.S. Durh., has been appointed House Surgeon to the Royal Infirmary, Newcastle-on-Tyne.

SIM, J. B., M.D. Glasg., has been appointed Medical Officer for the Third District of the Nottingham Union.

SPENCER, W., M.D. Brux., M.R.C.S., L.R.C.P. Edin., has been appointed Health Officer to the Police, Gaols, and Paupers for the District of West Devon, Tasmania.

STANTON, THOMAS, M.B. Dub., L.R.C.S.I., has been appointed Health Officer for Koroit, Victoria.

WALLER, ALFRED W., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Stroud General Hospital, vice R. R. H. Mills-Roberts, M.R.C.S., L.R.C.P. Lond., resigned.

WILKINSON, A. T., M.D., M.R.C.P. Lond., has been appointed Physician to the Grove Retreat for Inebriate Women, Fallowfield, Manchester.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

CHELSEA INFIRMARY. Cale-street, S.W.—Locum Tenens during August and September to assist Medical Officer. Small fee. (Address Medical Officer.)

CITY OF LONDON LUNATIC ASYLUM, near Dartford, Kent.—Locum Tenens during the month of August. (Apply to the Medical Superintendent.)

COUNTIES OF CAITHNESS AND SUTHERLAND.—Medical Officer of Health for the above counties. Salary £400, with 100 for travelling and other expenses, except forms and official stationery and postages. (Apply to Mr. J. Brims, County Clerk, Thurso.)

GENERAL HOSPITAL, Birmingham.—Two Assistant House Surgeons for six months. No salaries, but residence, board, and washing will be provided.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London.—Two Medical Clinical Assistants in Out-patient Department.

LEWES DISPENSARY AND INFIRMARY AND VICTORIA HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with furnished apartments, coal, gas, and attendance.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with residence and maintenance in the house. Also an Ambulance Surgeon for six months. No salary, but hospital practice and certificate of attendance, together with board and lodging, will be given in exchange for services.

METROPOLITAN ASYLUMS BOARD.—Clinical Assistant at the Darenth Schools and Pavilions for Imbeciles, near Dartford, Kent. Board, lodging, and washing provided. No salary. (Apply to the Officer of the Board, Norfolk House, Norfolk-street, W.C.)

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL.—Assistant House Surgeon for six months. Board, apartments, and washing provided. No salary.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone, N.W.—Resident Medical Officer. Salary at the rate of £60 per annum, with board and residence in the Hospital.

STOCKPORT INFIRMARY.—Assistant to the House Surgeon for six months, with board and residence.

Births, Marriages, and Deaths.

BIRTHS.

ARNOLD.—On July 11th, at Park-road, Forest-hill, S.E., the wife of Ernest C. Arnold, M.B., F.R.C.S., of a daughter.

FARR.—On July 5th, at St. Heliers, Ealing, the wife of Ernest Farr, M.R.C.S., L.S.A., of a son.

JACKSON.—On July 13th, at Haulbowline, co. Cork, Ireland, the wife of Surgeon H. S. Jackson, R.N., of a son.

PARTRIDGE.—On July 7th, at Albany-road, Camberwell, the wife of W. T. Partridge, L.R.C.P., M.R.C.S., of a son.

RAW.—On June 26th, at Oak Bank, Crystal Palace-park-road, Sydenham, the wife of Wm. E. Raw, L.R.C.P. Lond., M.R.C.S., of a son.

SKIPPER.—On July 14th, at Tollington-park, N., the wife of Edward Skipper, M.D., of a daughter.

MARRIAGES.

KNIGHT—WARD.—On July 12th, at Bolton Gate, Cumberland, Alexander A. H. Knight, M.D., of Keswick, to Elizabeth Anna, widow of the late Rev. J. Clifton Ward, F.G.S., and eldest daughter of the late Robt. Benson, St. Helen's, Cockermouth.

LANGHORNE—GLEN.—On May 22nd, at St. Matthew's Church, Kensington, Adelaide, S. Australia, by the Ven. Archdeacon Farr, assisted by the Rev. W. A. Swan, M.A., T. Grant Langhorne, M.R.C.S., L.R.C.P., of Millicent, S.A., eldest son of Alexander G. S. Langhorne, Esq., and grandson of the late Rev. Thomas Langhorne, LL.D., to Caroline, third daughter of George Glen, Esq., S.M., Mayura, S.A., and granddaughter of the late Bishop of Adelaide.

TATHAM—MILLIKEN.—On July 9th, at the Parish Church, Clapham, Ernest John Tatham, of Halesowen, Worcestershire, M.D. Cantab., to Louisa Hammond Milliken, of Clapham-park, S.W.

TUBBY—PAYNE.—On July 15th, at Trinity Presbyterian Church, Clapham-road, Alfred Herbert Tubby, M.B., B.S. Lond., F.R.C.S., of Finsbury-circus, E.C., son of the late Alfred Tubby, of Chelmsford, to Beatrice, second daughter of William Payne, Esq., of Kennington-road, and the Guildhall, London.

WALKER—PYM.—On July 10th, at Tiverton, Robert Walker, M.D., of Budleigh Salterton, to Margaret, widow of F. Granville E. Pym, Esq., and daughter of R. W. Robinson, Esq., of Hillsborough House, Upper Norwood.

DEATHS.

BARTON.—On July 13th, at Fulbeck, Grantham, Lincolnshire, George Kingston Barton, M.D., F.R.C.S., aged 75.

BRAMAH.—On July 12th, at Harley-gardens, S.W., Thomas Joseph Bramah, M.A., M.R.C.S., aged 75.

BYASS.—On July 13th, at Marshalls, Cuckfield, Thomas Spry Byass, M.D., F.R.C.S., L.S.A., aged 83.

FAIRBAIRN.—On July 10th, at George-square, Edinburgh, William John Fairbairn, M.D., of Edinburgh and Rio de Janeiro, fourth son of the late Dr. Fairbairn, F.R.C.P.E.

GABB.—On June 10th, at Stann Creek, British Honduras, Frederic Edward Gabb, M.R.C.S., District Magistrate, younger son of the Rev. J. F. S. Gabb, of Charlton Kings, Cheltenham, aged 50.

MASON.—On July 9th, at Merton House, Ross, Herefordshire, Henry William Mason, L.R.C.P. Lond., M.R.C.S., aged 37.

POPHAM.—At her residence, Gawler, South Australia, from pleurisy, Julia Louisa Popham, aged 37, the wife of Francis Wm. Home Popham, L.R.C.P., M.R.C.S., after a painful illness of a few days.

PRIDHAM.—On June 16th, at 10, Cromwell-crescent, S.W., Charles William Pridham, F.R.C.S., M.R.C.P. Edin., late of Paignton, and eldest son of the late F. L. Pridham, of Bideford, aged 58.

RALFS.—On July 14th, at Penzance, John Ralfs, M.R.C.S., F.R.M.I., aged 83.

SMITH.—On July 14th, at Great King-street, Edinburgh, George Hoggan Smith, M.D., formerly of Penang.

THOMSON.—On July 10th, at Southbank Hall, Bournemouth, George Lawson Thomson, M.D., of Woolton-hill, Newbury, aged 70.

N.B.—A fee of 1s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 17th, 1890.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
July 11	29·91	N.	59	51	91	60	51	·43	Cloudy
,, 12	29·99	S.W.	64	51	91	64	50	·05	Cloudy
,, 13	29·85	W.	61	59	108	72	52	..	Cloudy
,, 14	29·85	S.W.	63	63	108	70	60	..	Cloudy
,, 15	29·89	W.	63	61	119	79	61	..	Cloudy
,, 16	30·10	N.W.	62	58	108	77	55	..	Hazy
,, 17	29·96	N.E.	63	62	95	75	60	..	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

GOLDEN WORDS.

SIR EDWIN CHADWICK, the great sanitary reformer recently gone to his rest, was frequently in the company of the late Emperor Napoleon, who on one occasion asked him what he thought of Paris. "Sire," was Sir Edwin's answer, "they say that Augustus found Rome a city of brick, and left it a city of marble. If your Majesty, finding Paris fair above, will leave it sweet below, you will more than rival the first Emperor of Rome." Napoleon, we understand, was greatly pleased with the suggestion, and entered very fully into the question of the sanitation of Paris with Sir Edwin Chadwick, at whose instance, moreover, he instituted a commission of inquiry into the whole subject.

Mr. A. H. Squire.—The annotation was based upon an announcement in the *Pharmaceutical Journal* of the preceding week. The original table was not before us at the time.

Mr. P. Coote.—We have not yet published a full list, but shall probably do so shortly.

THE R. H. S. CARPENTER MEMORIAL FUND.

To the Editors of THE LANCET.

SIRS,—Allow me to announce that since writing to you last week I have received the following additional subscriptions in aid of the above fund:—

Dr. J. G. Glover ..	..	£2	2	0	Dr. John Brown (Bacup)	£0	10	6
Dr. Hugh Woods ..	..	1	1	0	Mr. Marshall (Dover) ..	0	10	0

I would like at the same time to remind my fellow practitioners that the objects of the fund are meritorious and just. They are—(1) To place a suitable stone above the grave of a man who during his life spared neither time, energy, nor money in his endeavours to better the social position of his professional brethren, and (2) to return to his daughters, who sadly require help, some of the money spent by their father for the benefit of struggling medical men.

I am, Sirs, yours faithfully,
JOHN PAGE HENTSCH, M.R.C.S.,
Hon. Sec. to the Committee.

201, Southampton-street, Camberwell, S.E., July 15th, 1890.

ETHER *v.* CHLOROFORM.

To the Editors of THE LANCET.

SIRS,—I notice in your issue of July 5th a letter from Mr. H. Chester Nance, in which he mentions that he has administered the A.C.E. mixture in Ormsby's inhaler. This is decidedly a misuse of a very useful inhaler; because chloroform, even in a mixture, should never be given except by the open method.—I am, Sirs, your obedient servant,

Queen Anne-street, July, 1890. HENRY DAVIS.

CHESS PROBLEMS.

WE reproduce, at the request of several correspondents, the substance of an article entitled "Chess Problems," which appeared in THE LANCET of Nov. 9th, 1823, and to which we referred in commenting upon a letter from Mr. Thomas Edward Amyot, published in THE LANCET of April 26th, 1890, as being the first chess problems ever published in an English periodical.

"In a former number, we gave some account of the origin of the game of chess. This is perhaps the only game to which the medical student may profitably devote any portion of his time and attention. It is liable to none of the objections which apply to games of chance, it holds out no encouragement to cupidity, and while it affords an agreeable relaxation from more serious pursuits, it strengthens the intellectual faculties by the unremitting attention which it demands, and may even have some influence on our moral habits by the lessons of foresight, patience, and perseverance which it inculcates. To avoid errors on the one hand by foresight and circumspection, and to endeavour to retrieve such as are committed on the other by patient industry and perseverance—these are maxims applicable to all professions and situations in life, and which, as the American philosopher, Dr. Franklin, has observed, are constantly illustrated on the chess-board. .... We have no hesitation in recommending the study of chess to such younger members of the profession as are unacquainted with its principles; and for those who have already made some proficiency in the game we shall in this and every succeeding number insert a few problems, as an exercise of their skill and ingenuity. Many original positions will be given, and others will be selected from sources not generally accessible. The solutions will be given at the end of each volume of THE LANCET; but it cannot be too strongly impressed upon the student in chess that the whole benefit to be derived from the study of problems must depend on his solving them *proprio motu*, and resolutely forbearing to consult solutions.

PROBLEM I.

The white is required to give checkmate to the black in three moves.

Position of the Pieces.

WHITE.

King at his queen's rook's third square. Rook at his queen's bishop's square. Bishop at adverse queen's rook's fourth square. Pawns at queen's knight's second, and adverse queen's bishop's second square.

BLACK.

King at his queen's rook's second square. Queen at her fourth square. Bishop at queen's knight's fourth square. Pawns at queen's knight's second and queen's rook's third squares.

PROBLEM II.

The white to give checkmate with the pawn in four moves.

Position of the Pieces.

WHITE.

King at adverse king's rook's third square. Rook at adverse queen's rook's fourth square. Knight at his king's fourth square. Pawn at king's knight's fourth square.

BLACK.

King at his rook's square.

This is a very elegant problem. Whoever solves it may be assured that he has considerable aptitude for the game of chess.

PROBLEM III.

The black to give checkmate to his adversary in five moves.

Position of the Pieces.

WHITE.

King at his rook's square. Queen at adverse king's knight's fourth square. Rook at king's bishop's square. Rook at queen's bishop's square. Knight at adverse king's bishop's fourth square. Pawns at the king's rook's and king's knight's squares, and at the king's bishop's fourth square.

BLACK.

King at his rook's square. Queen at her bishop's fourth square. Rook at queen's bishop's square. Knight at adverse queen's third square. Knight at adverse queen's bishop's third square. Pawns at king's rook's and king's knight's squares."

Enquirer.—We have over and over again in our columns protested against the nuisance of the tolling of church bells, and pointed out its inconveniences and dangers. We fear, however, that the only remedy to be looked for will lie in a thorough rousing of public opinion against the anachronism.

Mr. D. A. Beaufort.—This subject is referred to at some length in THE LANCET of June 15th, 1889, p. 1205. More recently a paper was read by Mr. T. Christy, summarising the results of further investigations.

A. M. Z.—Certainly so.

"HÆMATURIA AND GARDEN RHUBARB."

To the Editors of THE LANCET.

SIRS,—I read with interest the communications on the above subject in recent issues of THE LANCET. As I am not of strong constitution, I have to avoid pastry and the seeds of fruits; but when the rhubarb comes in season I eat not sparingly, but largely, of it stewed with sugar. I have never during several years noticed any effects from it, beyond perhaps, once in a way, those of a laxative.—Yours truly,

July, 1890. AUDI ALTERAM PARTEM.

THE ORIGIN OF CLINICAL THERMOMETRY.

P. H. W.—The application of thermometry to clinical observation may be said to have arisen almost insensibly out of the much earlier attempts to note the physiological variations of animal heat, dating from the days of Sanctorius, and carried on in later times by John Hunter, Dr. J. Davy, and many others. Wunderlich, who himself did so much for clinical thermometry, points out that Currie took thermometric observations in his cases of fever. Bouillaud (1837) reports 300 observations. Piorry (1838) saw the need of thermometry in disease, but his directions were much involved. Andral, however (1841), was one of the first to systematically use the thermometer, although it was not until the middle of the present century that the publications of Baerensprung and Traube can be said to have really popularised the practice. We must, however, refer our correspondent to the introductory chapter of Wunderlich's inestimable work ("Clinical Thermometry," 1870, translated by Woodman, New Sydenham Society) for fuller details on this interesting point. It may be recalled that for many years non-registering thermometers were employed, the registering thermometer being invented by Casella. Our correspondent therefore will see that it is hardly possible to give a direct answer to his question as to who was the "inventor," or what was the date of "discovery" of the clinical thermometer.

EXTRAORDINARY OBESITY.

To the Editors of THE LANCET.

SIRS,—Three years ago I sent to THE LANCET an account of an extraordinary child born at West Camel, who promises to be a future Daniel Lambert. He is now five years and a half old, and the following are his dimensions:—Height, 4 ft.; weight, 8 st. 5 lb.; circumference of abdomen, 42½ in.; waist, 37½ in.; chest, 37 in.; neck, 14 in.; head, 22½ in.; thigh, 23 in.; calf, 15½ in.; arm, 11½ in.; forearm, 10½ in. He is very healthy, eats all day long, if he can get food, and is fairly intelligent. The parents are by no means corpulent, and the other children are of ordinary size.

While on the subject of obesity, may I remark that it appears to me its physiology has not received the attention it deserves? We all know that certain foods fatten some people, and that sugar and starch are the great offenders. Beyond this there is but little light. Corpulency in excess is a diseased condition, and, I think, deserves more consideration in our treatment of many ailments, of which, I assert, it is the primary cause. Corpulent people are often ailing, are more subject to gout, colds, bronchitis, and many other diseases than lean people. But the condition excites no sympathy; they are supposed to be fond of good things, and deserve to be fat. A chimney that smokes is swept, but a sufferer from obesity is left to go on in his misery, and he goes to "quacks" for relief. Personally, I have taken great interest in this subject, and have treated numbers of people for obesity with great success. The ordinary dietary for our climate is admitted to be faulty. This has been constructed during hundreds of years by cooks, and not by physiologists. Let us hope, as we live in an age of change, that the philosophy of dietetics may soon teach us how "to eat to live," not how "to live to eat." Longevity and leanness are twins.

I am, Sirs, yours faithfully,

Sherborne, July 6th, 1890. N. E. YORKE-DAVIES, L.R.C.P. Lond.

"A CASE OF PNEUMONIA."

To the Editors of THE LANCET.

SIRS,—In reply to the letter signed "B." in your last issue, let me say that my case of pneumonia was not reported on account of its rarity, but to draw special attention to the powerful absorbent action of the vessels of the lung in reducing a consolidated condition of that organ to one of comparative soundness in a few days. In the books of reference I have by me mention is made of cases where there has been little if any expectoration, but nowhere do I find any specific reference to the lymphatics and a process of reabsorption of exuded material.

I am, Sirs, yours faithfully,

Hull, July 16th, 1890. T. CAMERON.

DISPENSARIES.

To the Editors of THE LANCET.

SIRS,—I am desirous of obtaining information respecting the working, rules, and statistics of dispensaries in towns where the population is about 9000. With a view to this I shall be very grateful if any of your readers who happen to hold office in institutions of such kind and such surroundings (population 9000, purely agricultural) will send to me, at my private address as below, the rules and last reports of their dispensaries. I am, Sirs, yours truly,

K. H. SMITH,
Hon. Secretary, Ely Dispensary.

The Cambridge-road, Ely, Cambs., July 12th, 1890.

PERSISTENT DANDRUFF.

To the Editors of THE LANCET.

SIRS,—Can any of your readers suggest treatment for persistent dandruff with shedding and loss of colour of the hair? Is pilocarpine (or jaborandi) of use, and in what form?

I am, Sirs, yours faithfully,

July 13th, 1890. M.D.

"WHITE OR GREY."

IN reference to a short letter headed as above, and signed "Senex," a correspondent informs us that Dr. C. J. Kelly, in a communication to a contemporary in 1887, reported that creasote, used in mistake, caused the hair to turn quite grey. The report was copied in several American medical journals.

Medical Staff.—We do not think any advantage would be gained by the publication of our correspondent's letter. We have known quite as absurd mistakes made in civil life in this country. We believe the whole question will be brought under the consideration of the Secretary of State.

"SUITABILITY OF CERTAIN CLIMATES FOR PHTHISIS."

To the Editors of THE LANCET.

SIRS,—In reply to "P. & O.," I beg to say I think it would be difficult to find a climate amongst those he mentions possessing the combined characteristics of being near the sea, warm, and at the same time bracing. It seems to me that in tropical and subtropical latitudes it is only inland and high lying plateaus that can be warm and at the same time bracing, this latter quality being largely due to the height and dryness; but these are subject to great variations of temperature. I think the majority of phthisical people find that warmth, with dryness, brightness, and lightness of air (such conditions of atmosphere as exist in Bechuanaland) suit them well; but it is a dry, arid country, and at present there would be few amenities of life. Basutoland has a very healthy climate, though not so dry as that of Bechuanaland. It is mountainous, well watered, and more capable of supplying some of the comforts of life, such as butter and more varied food; and there should be good sport. I have before me tables of daily meteorological observations made close to Basutoland in 1885. The observations were made at 8 A.M.—a critical time for testing the humidity of the atmosphere. On no morning during the year was the air saturated. The mean relative humidity for the six months from October to March was 57 per cent., and for the six months from April to September 67 per cent. The absolute maximum temperature of the year was 90° F., which was only reached twice, and then during great dryness of atmosphere. The mean maximum temperature of the three warmest months was 86° F., and the mean minimum temperature for the same months was 57° F.; so that the heat is not excessive, taking into account the conditions of air, and the nights are cool. In winter it is sometimes very cold, but dry. It should be remembered, however, that while the thermometer may rise to over 100° F. in one place, it may not touch 90° F. at another place only a few miles away, the environment of a place in a dry country influencing climate very much; so that while there are many healthy, bracing places in Basutoland, there must be others that are damp and cold in winter, sultry and relaxing in summer.

I am, Sirs, yours faithfully,

Bromley, Kent, July 14th, 1890. J. A. ROSS, M.D.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. T. H. Huxley, London; Dr. Makins, London; Dr. Savill, London; Mr. A. Haviland, N. Malvern; Mr. R. Berkeley, London; Messrs. Gallais and Co., London; Sir C. A. Cameron, Dublin; Messrs. Brooks, Peel, and Co., London; Dr. R. R. Rentoul, Liverpool; Messrs. Illingworth and Co., Leeds; Dr. Grant, London; Dr. Ross, Bromley; Dr. D. Scott Moncrieff, Edinburgh; Mr. H. Davis, London; Messrs. Blondeau and Co., London; Mr. Hordley, Stoke-upon-Trent; Mr. Grose, North Devon; Mr. Benthall, Southsea; Mr. Fox, Hertford; Mr. Van Der Straaten, Chesterfield; Dr. Snow, London; Mr. Muddock, Broughton Ferry; Dr. Bronner, Bradford; Dr. J. Hunter, Toronto; Dr. Horrocks, Bradford; Mr. Lambert, London; Rev. R. K. Smith, Ely; Dr. G. W. Steeves, Liverpool; Messrs. Masson, Paris; Mr. Stonehouse, Glasgow; Dr. O. Pritchard, London; Mr. White, Addlestone; Dr. L. E. Stevenson, Carlisle; Mr. Stocker, London; Messrs. Van Houten and Zoon, Holland; Mr. Boger, Fowey; Dr. Love, St. Louis; Dr. St. John Roosa, London; Mr. Jalland, York; Mr. H. Lane, Bath; Messrs. Lee and Martin, Birmingham; Mr. Osburne, Hythe; Messrs. Christy and Co., London; Mr. Godfrey, Balham; Mr. Jenkins, Salford; Dr. J. B. Jackson, Coventry; Mr. W. E. Porter, Lindfield; Dr. V. D. Harris, London; Mr. Birchall, Liverpool; Mr. Cripps, London; Mr. Bright, Forest-hill; Mr. Pentland, Edinburgh; Mr. Scott, London; Mr. Cole, Exeter; Mr. Arrowsmith, Bristol; Mr. Ivatts, Dublin; Dr. Water, Chester; Mr. Ralph, London; Dr. Coghill, Birmingham; Mr. Carter, London; Mr. Broom, Llanelly; Mr. Dickinson, Southfields; Mr. A. Hope, Bloomsbury; Rev. Mr. Bagot, Manchester; Mr. Russell, Liverpool; Dr. E. Goldwin; Mr. G. C. Stephen, London; Messrs. Martin and Brady, London; Mr. Blackett, London; Messrs. Burroughs and Wellcome, London; Mr. S. M. Owens, Brisbane; Messrs. Shelley and Co., London; Dr. C. Pope, London; Messrs. Oppenheimer Bros. and Co., London; Mons. A. Hamon; Mr. W. Hall, Harlesden; Dr. W. R. Hill, Lymington; Surgeon Leahy, Hyderabad; Mr. Frost, Huddersfield; Dr. G. Fleming; Dr. W. Squire, London; Mr. Brims, Sutherland; Mr. Peacock, London; Dr. Bamford, Uttoxeter; Mr. Steele, Midlothian; Dr. Evans, Derby; Mr. Godfrey, Jersey; Mr. Ainsworth, London; Mr. Nadin, Manchester; M. Alex. G. B. Fullerton; Mr. C. H. Leet, Bootle; Mr. Hornibrook, Bloomsbury; Country, London;

Medical Staff; A Teacher; Bibliothécaire de la Société Française d'Hygiène, Paris; Secretary, General Hospital, Birmingham; A Ten Years' Subscriber; Sanitas, London; Clerk, City of London Lunatic Asylum, Dartford; M.D., Bayswater; Locum, London; A Country Practitioner; Zeta, London; Secretary, General Hospital, Tunbridge Wells; Secretary, General Infirmary, Worcester; M.D., London; City Infectious Hospital; Matron, Huddersfield; K. Z., London; Corriere Sanitario, Milano; Box 26, Llanelly; Enquirer; Secretary, Queen's Hospital, Birmingham; H. D.; Student, London; P. H. W.; Lady Superintendent, Lincoln's-inn: Secretary, Queen Charlotte's Lying-in Hospital, Marylebone; E., London.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. George, Worcestershire; Mr. Sisson, Newcastle; Messrs. Foster, Brown, and Co., Canada; Major-General Collinson, Darlington; Messrs. Woolley and Sons, Manchester; Mr. Lawson, Wantage; Mr. Tyte, Minchinhampton; Mr. Bigg, London; Mr. Hutchinson, Oxon; Dr. Monting, Steyning; Mr. Elwin, Dover; Mr. Hunter, Bo'ness; Mr. Blatchley, London; Mr. Thin, Edinburgh; Dr. Moore, Hants; Dr. Studdert, Bournemouth; Mr. Hitchin, Heywood; Mr. Bell, London; Mr. Gabe, Morriston; Mr. Ricketts, Liverpool; Mr. Johnson, Newport; Dr. G. P. Elliott, Todmarden; Mr. Smith, Wolsingham; Messrs. Richardson and Co., Leicester; Dr. Motter, Southampton; Dr. Langhorne, South Australia; Dr. Hyslop, Salop; Mr. Bullwait, Derby; Mr. Mitchell, London; Mr. Francis, London; Mr. Fox, Manchester; Mr. Walker, Norfolk; Mr. Jones, Margate; Dr. Paul, Camberwell; Dr. Thomas, Welshpool; Dr. Latham, Ashton-in-Makerfield; Mr. Ladd, Canterbury; Mr. Morrison, Highgate; Mr. Thompson, Southport; Mr. Fox, Hertford; Mr. Bonar, Cornwall; Dr. Wood, Pontypool; Dr. Beckett, Charlton, Victoria; Mr. Heywood, Manchester; Mr. Margrave, Llanelly; Dr. Rafter, Secforth; Miss Murray, Huddersfield; Dr. King, Cornwall; Mr. Cottingham, London; Messrs. J. Carle and Son, New York; Dr. Lambert, Bradford; Mr. Tidswell, Cornwall; Mr. Foster, Llandudno; Mr. Sandford, Manchester; Cito, London; Veritas; Sister Katherine, Plaistow; Medical Officer, Essex; College of State Medicine, London; Euphia, London; Hydro, London; Yorkshire College, Leeds; Taxis, London; Sister A., London; Express Dairy Co., London; D. S., London; Scotia, London; Medicus, Newcastle-on-Tyne; Doctor, Notting-hill; P. H. D., Edinburgh; E. F., High Holborn; Graduate, London; Surgeon, Sheffield; Medicus, Stoke Newington; Vico, London; Alpha, Bedford; R. H., Preston; A. B., Newcastle; Deltoid, London; Tincture, London; Cromwell House, Northallerton; Sunrise, London; Successful, London; Nucleus, High Holborn; M.B., London; Alpha, Belfast; R. W., London; Questor, London; T. H., Manchester; Medicus, Sheffield; Medicus, Margate; C. B. A., London; X. Y. Z., London; J. H., Scarboro'; Wentworth, London; A. B. C., London; S. T. P., City.

NEWSPAPERS.—*Hull News, Leigh Burghs Pilot, Kensington News, Yorkshire Herald, Lewisham Gazette, West Yorkshire Pioneer, Birmingham Gazette, Manchester City News, Bradford Observer, Citizen, Daily News, Lytham Times, Brighton Argus, Mark Lane Express, Sussex Daily News, North China Herald, Weekly Free Press and Aberdeen Herald, Pharmaceutical Journal, Kendal Mercury, Northampton Mercury, Buxton Herald, Morning Post, Freeman's Journal, Local Government Chronicle, City Press, Hastings and St. Leonards Observer, Western Daily Press, Liverpool Daily Post, Reading Mercury, Sunday Times, New York Herald (London), Hertfordshire Mercury, Windsor and Eton Express, Temperance Chronicle, Kilkenny Journal, Builder, Sheffield Daily Telegraph, Metropolitan, Surrey Advertiser, Denbighshire Free Press, Brood Arrow, Chemist and Druggist, Architect, West Middlesex Standard, North-Eastern Daily Gazette, Law Journal, Guy's Hospital Gazette, Natal Advertiser, Southport Guardian, Spectator, Monmouthshire Beacon, Mining Journal, United Ireland, Engineer, Saturday Review, Beckenham Journal, St. Stephen's Review, Kentish Observer, County Gentleman, West Middlesex Advertiser, Liverpool Echo, Sunday Review, Scotsman, Evening News and Post, The Gentlewoman, Ashton-under-Lyne Reporter, &c.*, have been received.

Medical Diary for the ensuing Week.

Monday, July 21.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

Tuesday, July 22.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

Wednesday, July 23.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

Thursday, July 24.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

Friday, July 25.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, July 26.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

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